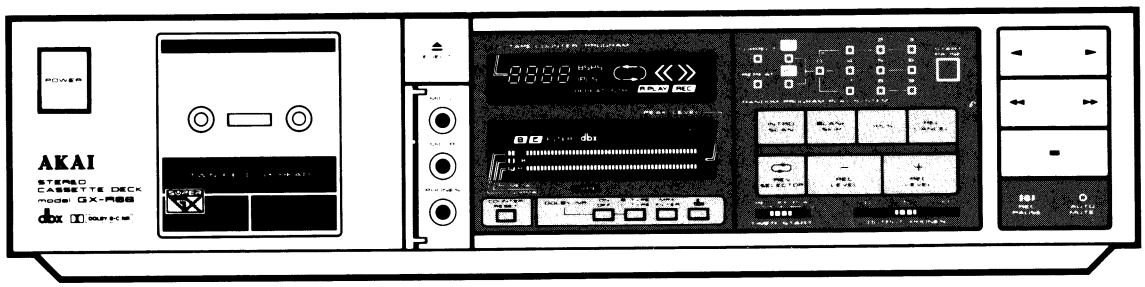
AKAI SERVICE MANUAL



STEREO CASSETTE DECK

MODEL GX-R66

ABBREVIATIONS FOR SERVICE MANUAL MODEL GX-R66

ABBREVIATION	EXPLANATION
AC	Alternating Current
ADJ	ADJust
BSP	Blank Skip Play
DC	Direct Current
EQ	EQualizer
FF (operation)	Fast Forward
FF (logic)	Flip Flop
FLD	FLuorescent Display
FREQ	FREQuency
FWD	ForWarD
INH	INHibit
IPLS	Instant Program Locating System
MPX	Multi PleX
NR	Noise Reduction
PB	Play Back
REC	RECord
REV	REVerse
REW	REWind
RMS	Root Mean Square
RPPS	Random Program Play System
SENS	SENSitivity
SW	SWitch
VCA	Voltage Controlled Attenuator or Amplifier
VR	Variable Resistor
V. REG	Voltage REGulator

STEREO CASSETTE DECK

MODEL GX-R66

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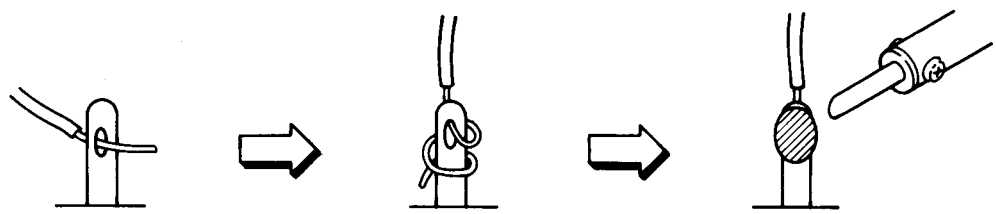
SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for [C] or [A], specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks. line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

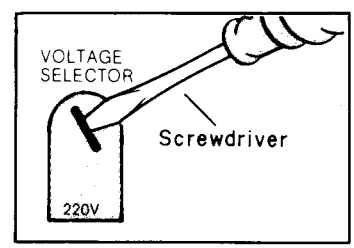
1. Parts identified by the ⚠ symbol parts are critical for safety.
   Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating Barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

VOLTAGE CONVERSION

Models for Japan, Canada, USA, Europe, UK and Australia are not equipped with this facility. Each machine is preset at the factory according to destination, but some machines can be set to 110V, 120V, 220V or 240V as required.
If VOLTAGE CHANGE is necessary, this can be accomplished as follows:
1. Disconnect power cord.
2. Turn the VOLTAGE SELECTOR located on the rear panel with a screwdriver until the correct voltage is indicated.



CYCLE CONVERSION

Cycle conversion is not necessary since GX-R66 use a DC motors.

SECTION 1

SERVICE MANUAL

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For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

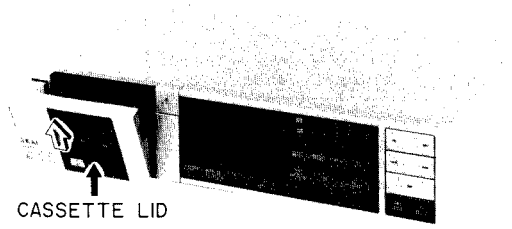
TRACK SYSTEM	4 Track 2 channel stereo system
TAPE	Philips type cassette
HEADS	Erase head x 1 Twin fieled super GX head for REC/PB x 1
MOTORS	Electronically speed controlled DC motor for capstan drive x 1, DC motor for cam drive x 1
WOW & FLUTTER	±0.07% W. peak (EIAJ) 0.05% (W RMS) 0.12% (DIN)
FREQUENCY RESPONSE	Normal : 20 to 17,000Hz ± 3 dB (EIAJ) CrO_2 : 20 to 18,000Hz ± 3 dB (EIAJ) Metal : 20 to 19,000Hz ± 3 dB (EIAJ)
S/N	60 dB 56 dB (EIAJ) Dolby B ON : Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz. Dolby C ON : Improves up to 15 dB at 500 kHz, 20 dB at 1 kHz to 10 kHz
DYNAMIC RANGE (dbx ON)	115 dB
DISTORTION	0.65% (METAL) 0.55% (METAL) 0.25% (CrO_2) 0.15% (NORMAL) } (EIAJ)
INPUT	LINE: 410mV/47 kohms
OUTPUT	LINE: 410mV/1 kohms
POWER REQUIREMENTS	100V, 50/60 Hz for Japan 120V, 60 Hz for USA and Canada 220V, 50 Hz for Europe except UK 240V, 50 Hz for UK and Australia 110V/120V/220V/240, 50/60 Hz switchable for other countries
DIMENSIONS	440 (W) x 105 (H) x 288 (D) mm (17.3 x 4.1 x 11.3 inches)
WEIGHT	5.0 kg (11 lbs)

* For improvement purposes, specifications and design are subject to change without notice.
* Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation. "Dolby" and the Double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.
* "dbx" is trademard of dbx Incorporated.

II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

1



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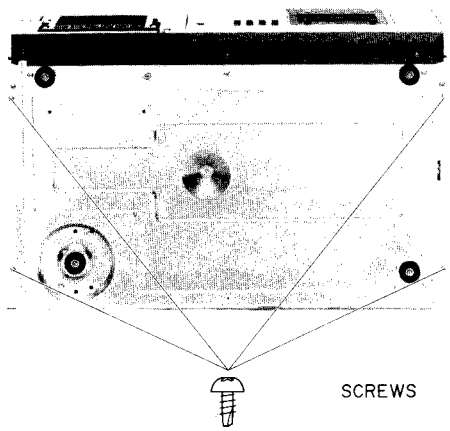

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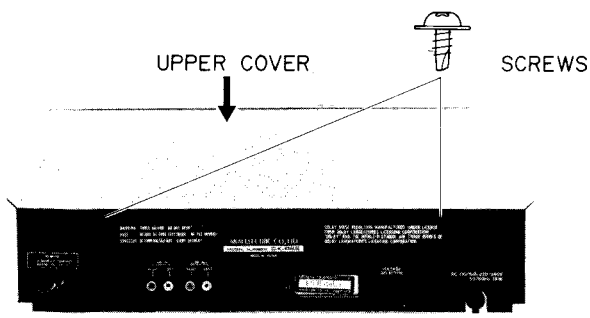

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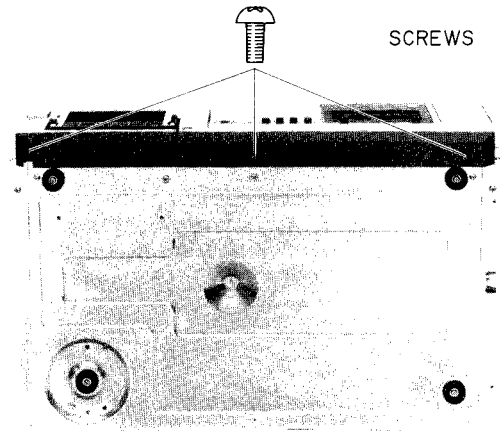

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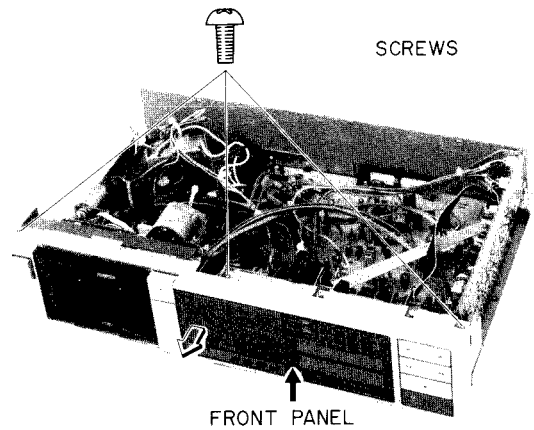

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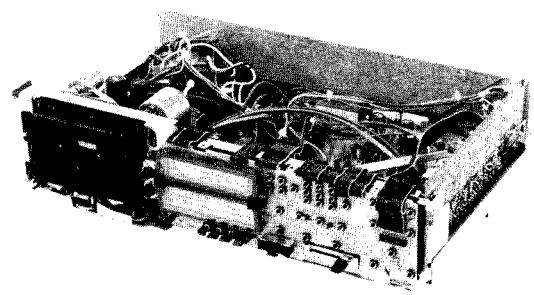


III. CONTROLS

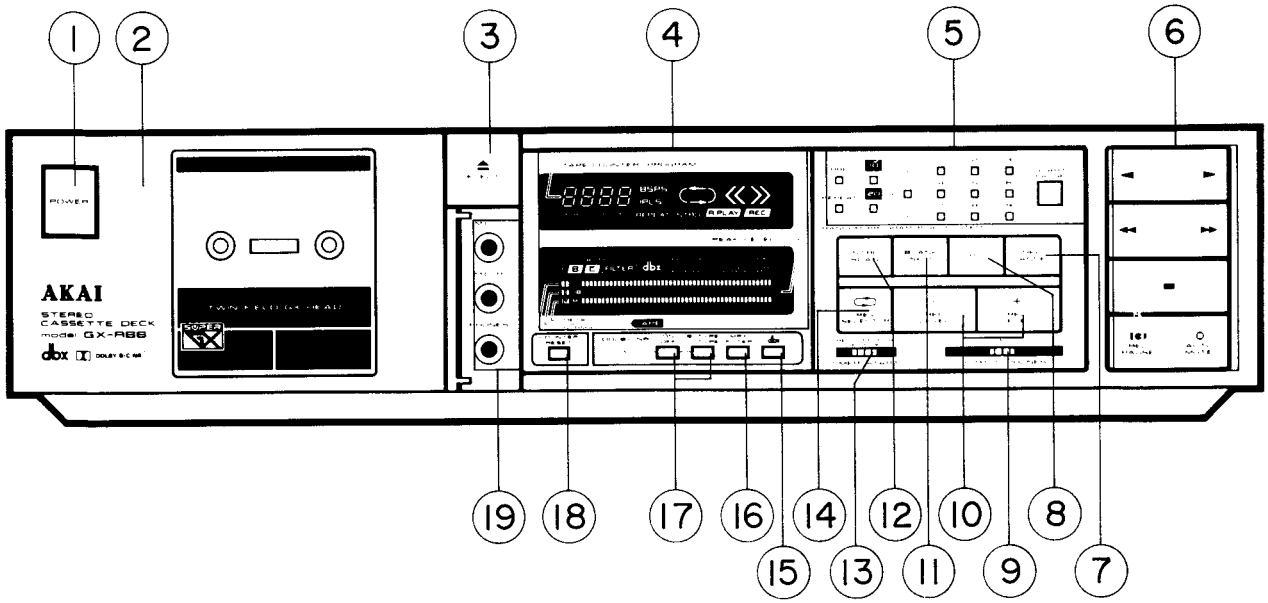


Fig. 3-1 Front View

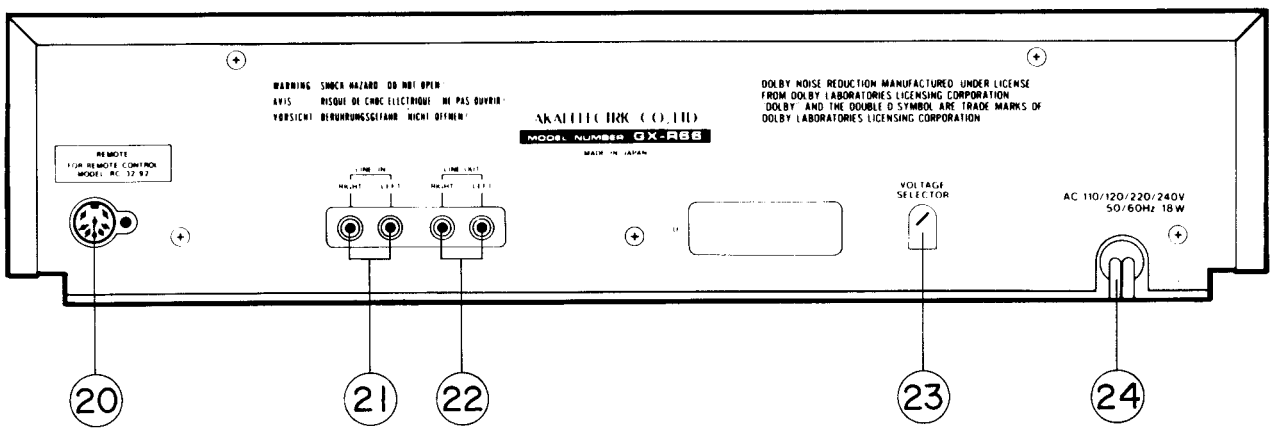


Fig. 3-2 Rear View

1. POWER SWITCH
2. CASSETTE LID
3. EJECT BUTTON
4. FL DISPLAY
5. RPPS BUTTONS
6. OPERATION BUTTONS
7. REC CANCEL BUTTON
8. IPLS BUTTON
9. OUTPUT/PHONES CONTROL
10. REC LEVEL CONTROL
11. BLANK SKIP BUTTON
12. INTRO SCAN BUTTON
13. TIMER START SELECTOR
14. REV SELECTOR BUTTON
15. dbx SWITCH
16. MPX FILTER BUTTON
17. DOLBY NR SWITCH AND SELECTOR
18. COUNTER RESET BUTTON
19. CONTAINS JACK FOR MIC L/R and HEADPHONE
20. REMOTE CONTROL JACK
21. LINE IN JACKS
22. LINE OUT JACKS
23. VOLTAGE SELECTOR
    ([U] MODEL ONLY)
24. AC POWER CORD

IV. PRINCIPAL PARTS LOCATION

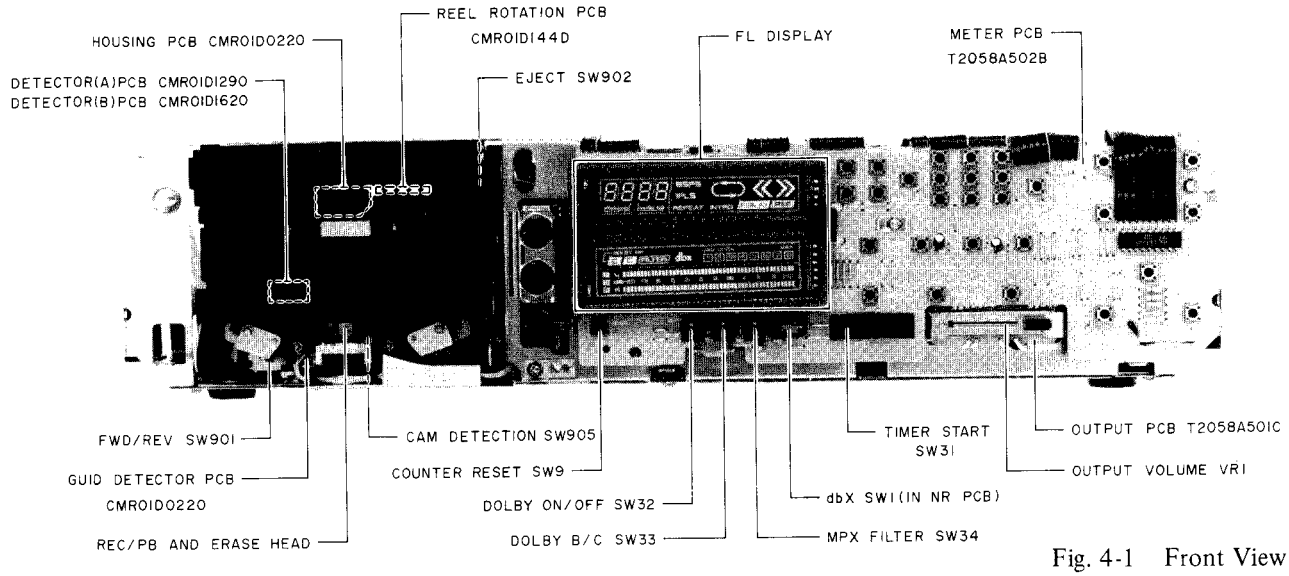


Fig. 4-1 Front View

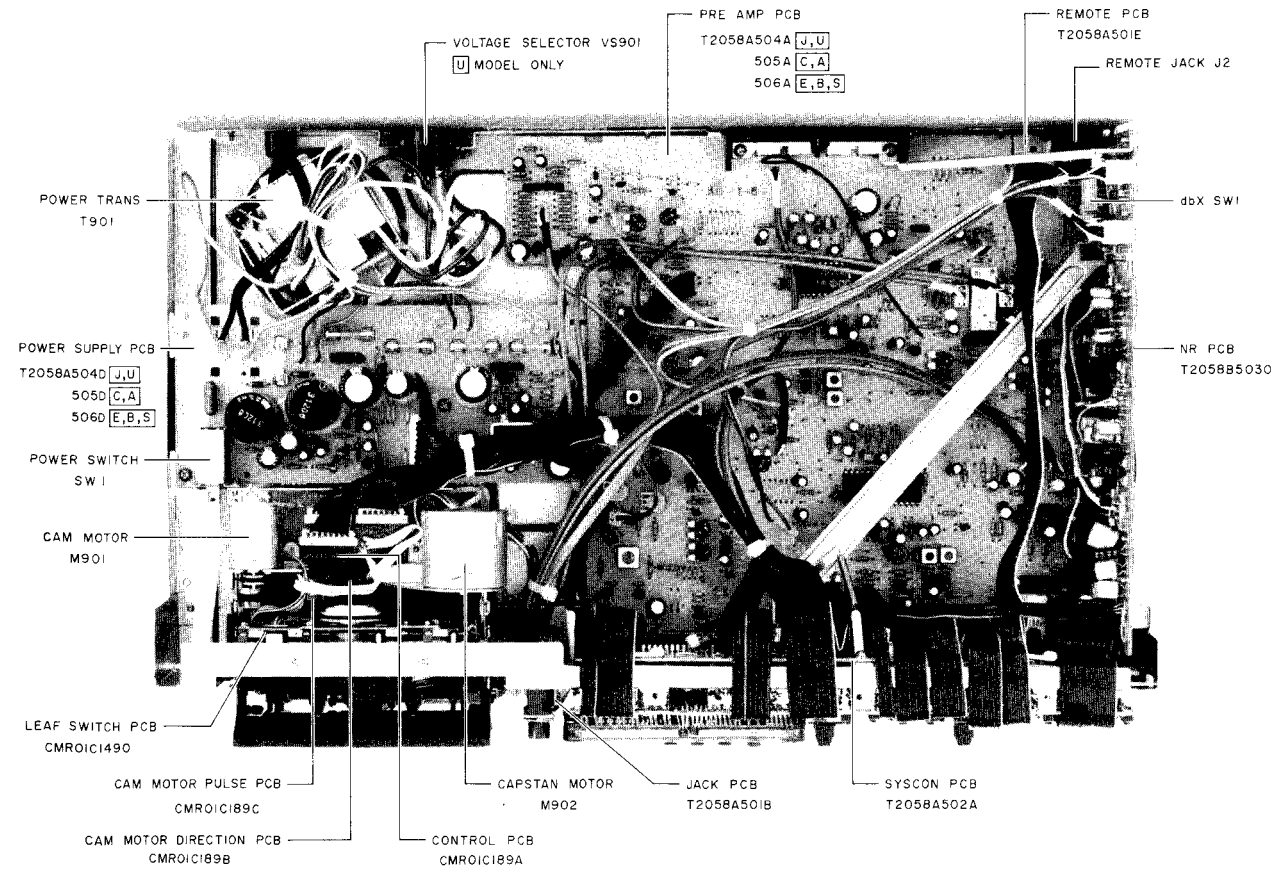


Fig. 4-2 Top View

V. MECHANICAL ADJUSTMENT

5-1 PINCH ROLLER PRESSURE MEASUREMENT (Refer to Fig. 5-1)

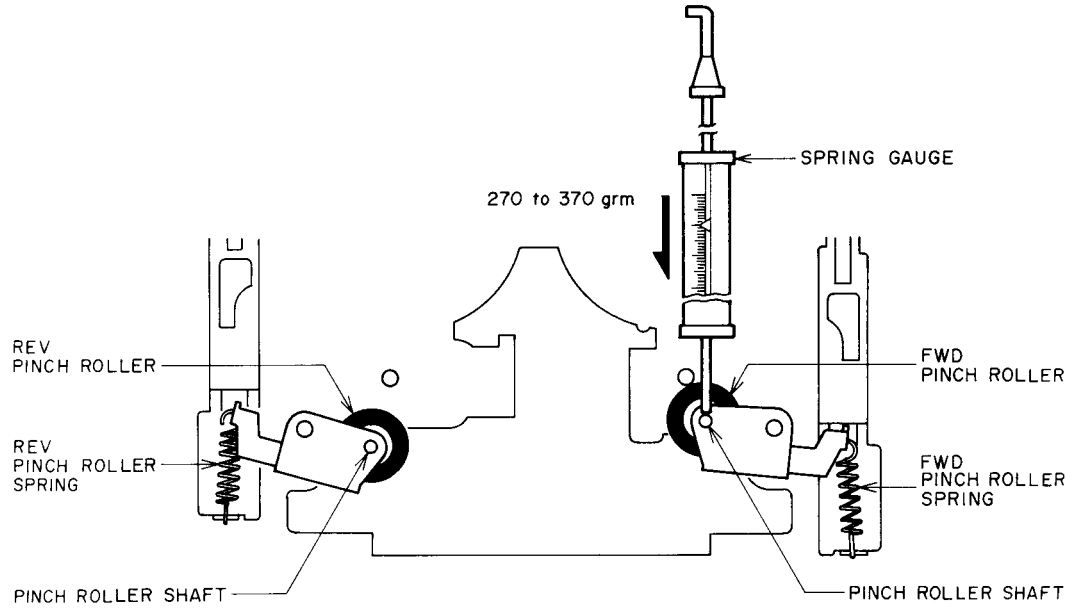


Fig. 5-1

Put in FWD PLAY Mode. Push pinch roller shaft down with the spring gauge, and push the pinch roller 1 to 2 mm away from the capstan and release slowly.
Read the spring gauge at the moment the pinch roller touches the capstan and begins to rotate. Specified contact pressure measurement is 270 to 370 grams. If the correct measurement is not obtained, replace the pinch roller spring. Do the same for the reverse side.

5-2 WINDING TORQUE MEASUREMENT IN EACH MODE (Refer to Fig. 5-2)

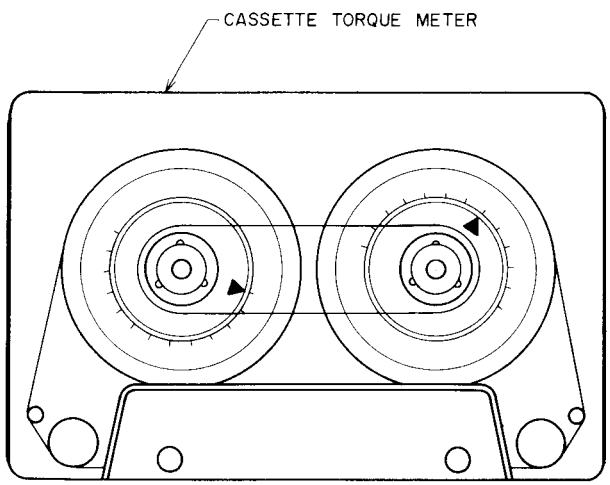


Fig. 5-2

Insert a cassette torque meter (AJ-751179) and measure in each mode.
For Fast Forward and Rewind, measure at the end of the tape when the tape has stopped running.
Forward or Reverse mode
Take up Torque: 25 to 45 g-cm
Back Tension Torque: 2 to 5 g-cm
Fast Forward or Rewind mode
Take up Torque: 70 to 150 g-cm

5-3 TAPE SPEED ADJUSTMENT (Refer to Fig. 5-3)

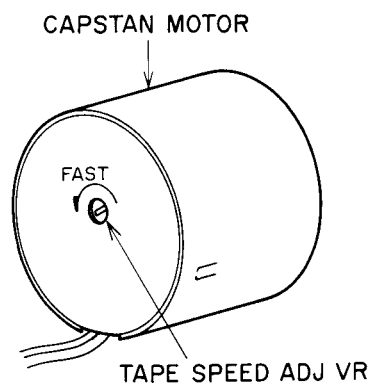


Fig. 5-3 Location of Tape Speed Adjustment Variable Resistor

Connect a frequency counter to Line Output terminal. Playback a 1,000 Hz pre-recorded Test Tape (AT-750744), or 3,150 Hz pre-recorded Test Tape (AT-751263), and adjust the Tape Speed Adjustment Variable Resistor (See Fig. 5-3) to obtain a tape speed of 1000±3Hz, or 3150±Hz.

VI. HEAD ADJUSTMENT

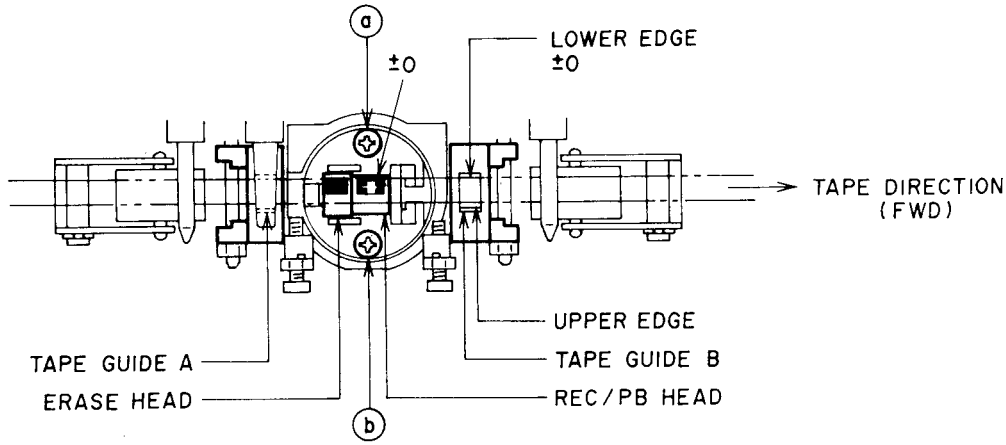


Fig. 6-1

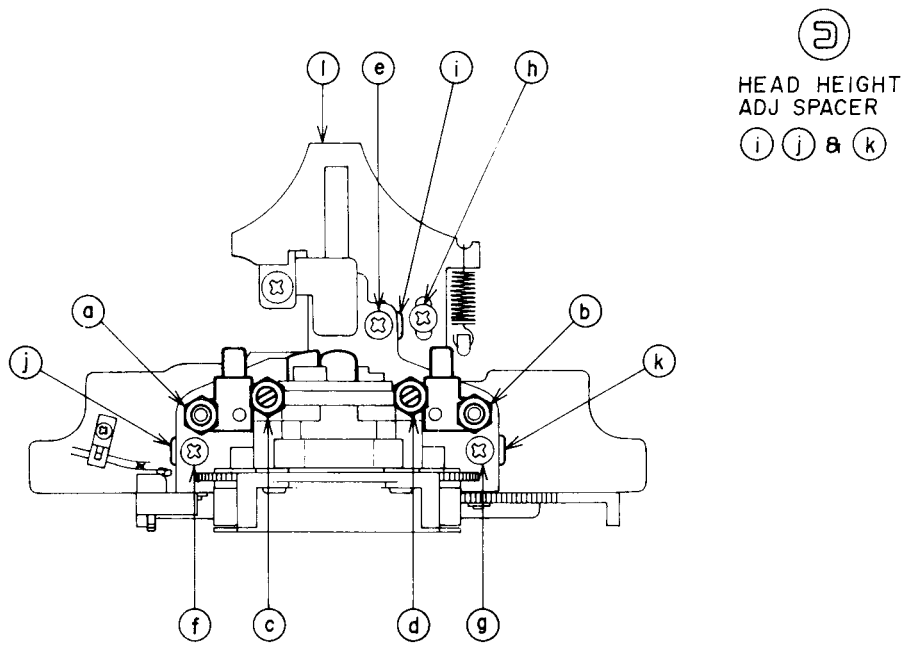


Fig. 6-2

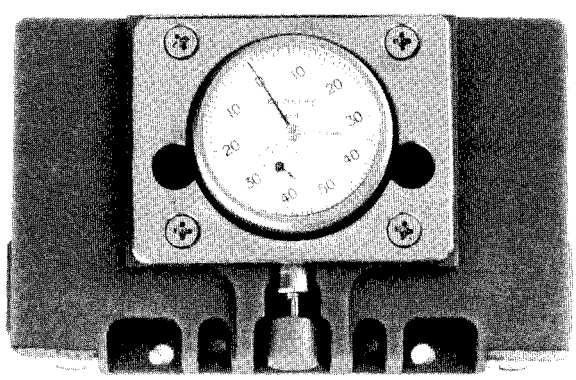


Fig. 6-3 Cassette Head Projection Gauge (TF-111CJ)

Fig. 6-4 Mirror Cassette Tape (MC-112C)

6-1 TAPE GUIDE ADJUSTMENT (Refer to Figs. 6-1, 6-2, & 6-4)

1) Use a mirror Cassette Tape (AT-751178) shown in Fig. 6-3 for better visibility of the head area, and select PLAY mode.
2) Adjust the tape guides A and B by turning the tape guide height adjustment nuts ⓐ and ⓑ in Fig. 6-2, so that the tape runs smoothly by the lower edge of both tape guides, and the tape is not hitched by those tape guides.

6-2 REC/PB HEAD AZIMUTH ADJUSTMENT

Playback a 10 kHz Head Azimuth Adjustment Tape (AT-750778) and adjust the screws ⓒ (FWD direction) and ⓓ (REV direction), so that the levels of both channels are maxima. (NOTE: Avoid turning the screws too far as other false maxima exist further away on both sides of the correct position.)

6-3 HEAD HEIGHT ADJUSTMENT

This adjustment is not necessary since GX-R66 is equipped with Rotary Head System (with Erase & REC/PB combination head). However, the confirmation of head height is necessary and it can be done as follows.

1) Confirm the azimuth in item 6-2.
2) Playback a 315 Hz (or 333 Hz) PB Level Adjustment Tape (AT-750773) in FWD Play mode, and adjust the PB level Adjuster (VR5 on Pre-Amp P.C Board) so that the LINE OUT level of left channel is −5.5 dBm. Then, check the level of the same channel in REV mode. The difference in level between FWD and REV modes should be within ±1 dBm. (−4.5 dBm to −6.5 dBm)
3) If the difference is more than ±1 dBm in item 2), adjust the tape guides A & B by turning both Tape Guide Height Adjustment screws ⓐ & ⓑ in the same direction by 1/4 turn (±0.1 mm), so that difference is within ±1 dBm.
4) The Head Height Adjustment is necessary if still the difference could not be corrected by above adjustment. It can be done by changing the Head Height Adjustment Spacers ⓘ ⓙ & ⓚ . (The thicknesses of these spacers are ⓘ = 0.45 mm, ⓙ & ⓚ = 0.3 mm).
   Loosen the screws ⓔ ⓕ & ⓖ for the spacer replacement.
   If the level is lower in REV mode, it means that the head is too hight, therefore replace the spacers by thinner ones. When the level is higher in REV mode, replace them by thicker ones.
   After the replacement of those spacers, do the same adjustment in item 1) and check the level of LINE OUT is −5.5 dBm ±1 dBm.
   For the further confirmation, playback a 4 Track Head Height Adjustment Tape (1 kHz/4 Track, AT-750775). Lint Output level of both channels should be more than −8 dBm and the difference in level between FWD and REV modes should be within ±1 dBm. Otherwise do the fine adjustment in the same manners as item 3) & 4).
5) When the head replacement is necessary, loosen only the screws ⓐ & ⓑ in Fig. 6-1 for easy replacement.

6-4 HEAD BLOCK PROJECTION ADJUSTMENT (Refer to Figs. 6-2 & 6-3)

Use a cassette Head Projection Gauge (AT-751180) and select FWD or REV play mode.
Loosen the screw ⓗ and adjust Chassis Head Part ⓘ so that the gauge indication at the time is 3.4 ±0.15 mm.
After the adjustment, apply paint-lock on the screw ⓗ .

VII. ELECTRICAL ADJUSTMENT

7-1 QUICK REVERSE SENSITIVITY ADJUSTMENT

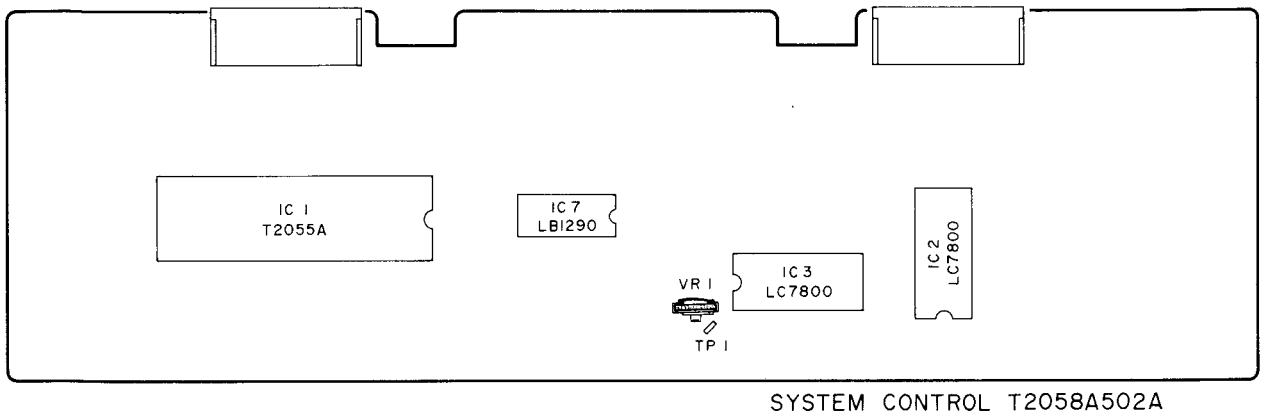


Fig. 7-1 GX-R66 Quick Rev. Sens. Adjustment Point

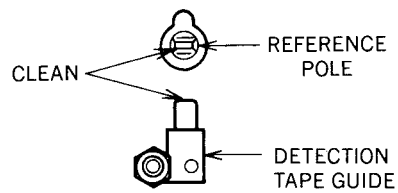


Fig. 7-2

1) Make a tapeless cassette pack by removing the tape from the white colored test tape.
2) Connect a Digital Voltmeter between TP-1 and Ground.
3) Using the tapeless cassette pack, adjust VR1 so that the Digital voltmeter reads 14V ±0.5V DC at FWD play mode.
4) If the Digital voltmeter reading is not increase to 14V DC at VR1 maximum. Remove the Resister R18 (150 kohms) from the system control P.C Board, and again adjust VR1 as the same manner in item 3)

NOTE: Clean the reference pole and the Detection tape guide before adjustment. (Refer to Fig. 7-2)

7-2 PRE-AMP P.C BOARD ADJUSTMENT

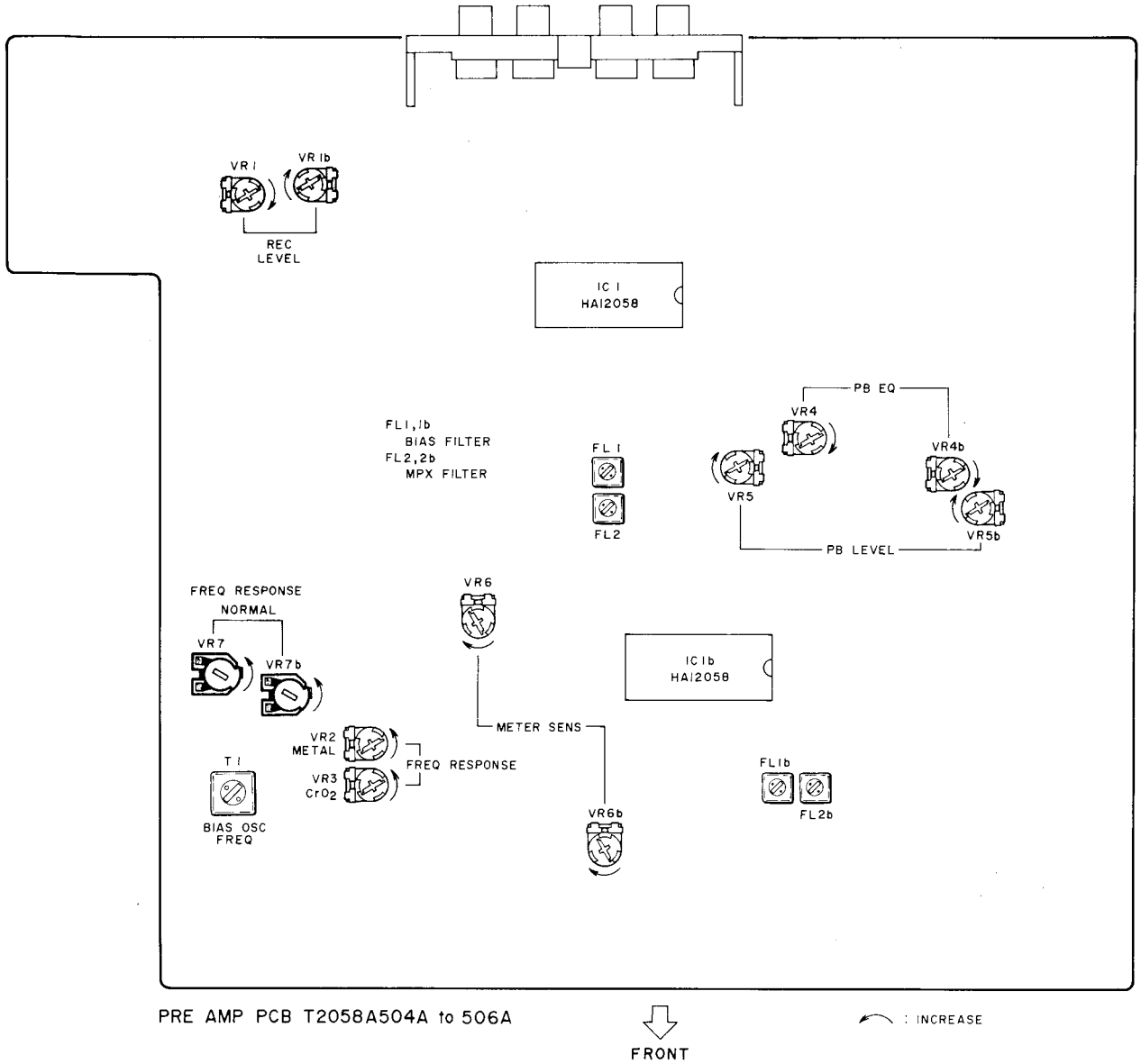


Fig. 7-3 GX-R66 Pre-Amp PCB ADJ Points

Step	Adjustment Item	Test Tape & Supply Signal	Mode	ADJ. Parts	Results	Remarks
1	FWD PB Level	333 Hz (AT-750773) or 315 Hz (AT-750773)	FWD PB	VR5	−6.1 ± 0.2 dBm or −5.5 ± 0.2 dBm	
2	REV PB Level	333 Hz (AT-750773) or 315 Hz (AT-750773)	REV PB		−6.1 ± 0.2 dBm or −5.5 ± 0.2 dBm	Confirmation
3	FWD PB EQ	10 kHz-15 dB (AT-750778)	FWD PB	VR4	−20.5 ± 0.5 dBm	
4	REV PB EQ	10 kHz-15 dB (AT-750778)	REV PB		−20.5 ± 0.5 dBm	Confirmation
5	BIAS OSC FREQ.	No Signal Input	REC	T1	100 kHz ± 0.5 kHz	
6	Normal Position Frequency Response	Normal Blank Tape 1 kHz, 10 kHz −25.5 dBm	REC/PB	VR7	1 kHz, 10 kHz Flat ± 0.3 dB	
7	CrO_2 Position Frequency Response	CrO_2 Blank Tape 1 kHz, 10 kHz −25.5 dBm	REC/PB	VR3	1 kHz, 10 kHz Flat ± 0.8 dB	
8	Metal Position Frequency Response	Metal Blank Tape 1 kHz, 10 kHz −25.5 dBm	REC/PB	VR2	1 kHz, 10 kHz Flat ± 0.8 dBm	
9	REC Level	Normal Blank Tape 1 kHz, −5.5 dBm	REC/PB	VR1	−5.5 ± 0.5 dBm	
10	Bias Filter	No Signal Input	REC	FL1	Minimum Output	Set REC Volume to Maximum
11	Meter Sensitivity	1 kHz Input	REC PAUSE	VR6	0vu indicated at Line output −5.9 ± 0.2 dBm	At this time, 0.1 dB decrease the Line Output level and confirm the 0vu indicator is light off.
12	MPX Filter	19 kHz from oscillator	REC	FL2	Minimum Output	MPX Filter SW "ON"

NOTES:
1. Above adjustments except for Step 5, 10 to 12 are all at FWD mode, and these adjustments at REV mode are not necessary, but the confirmation of each step at REV mode should be made.
2. Above adjustment except for step 12, adjustment should be made with Dolby N.R at OFF position.
3. Use only the tapes recommended for each adjustment:
   NORMAL Tape: MAXELL UD C-60
   CrO_2 Tape: TDK SA C-60
   METAL Tape: TDK MA C-60
4. Refer to Fig. 7-3, for above adjustments.

7-3 NR (dbx) P.C BOARD ADJUSTMENT

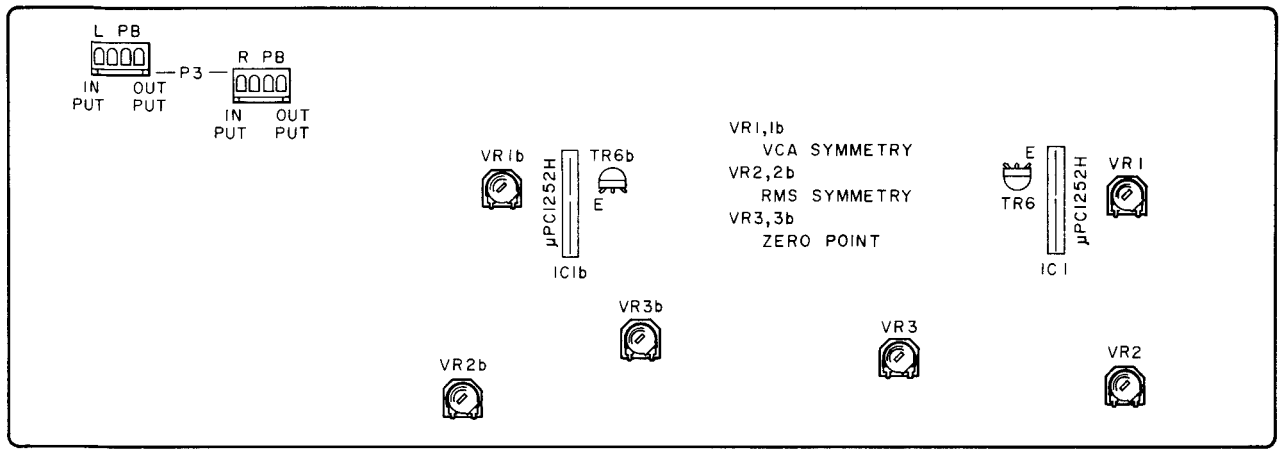


Fig. 7-4 NR PCB ADJ. Point

NOTICE: Adjustment of the dbx NR is not required except when a part is replaced or an adjustable VR is turned by mistake.

Step	Adjustment Item	Input Signal	Test Point	Adjustment Point	Result	Remarks
1	R.M.S Symmetry	100 Hz −5.5 dBm (410 mV) from an OSC	TR6 Emitter	VR2	Ovserve TR6 (Emitter) with an oscilloscope, and adjust with VR2 so that the peak value of the waveform becomes constant at 200 Hz	Refer to Figs. 7-5 and 7-6
2	V.C.A Symmetry	1 kHz −5.5 dBm (410 mV) from an OSC	P3 (R, L-ch) OUTPUT	VR1	Adjust VR1 so that the distortion at P3 terminal is minimized	
3	ZERO Point	1 kHz −5.5 dBm (410 mV) from an OSC	P3 (R, L-ch) OUTPUT	VR3	Adjust VR3 so that the output level of P3 output terminal correspond to the input at −5.5 dBm (410 mV)	
4	Confirmation of DECODER Operation	1 kHz −5.5 dBm ± 10 dB from an OSC	P3 (R, L-ch) OUTPUT	Confirmation	When the input signal level is chanted ±10 dB from 0vu (−5.5 dBm). Confirm theat the DECODER OUTPUT (P3) level is obtained as chart	Refer to Chart 7-1

NOTE: Adjustment should be made with dbx NR at ON position, PB MODE.

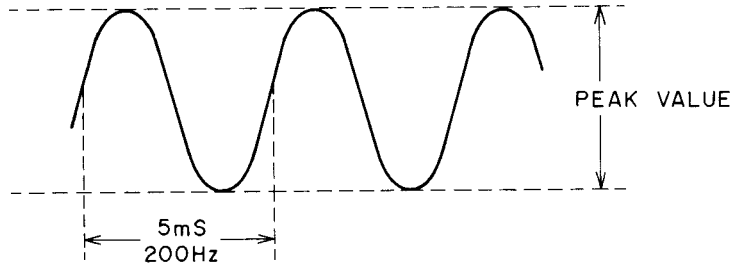
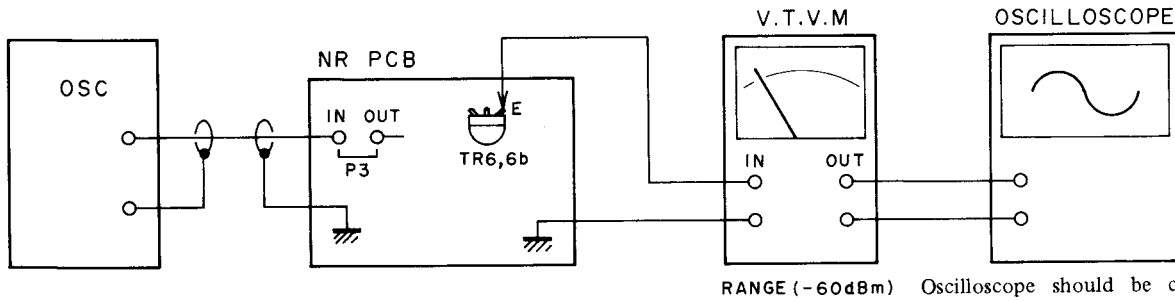


Fig. 7-5 Oscilloscope Waveform



Oscilloscope should be connected through VTVM, since the signal level of TR6, 6b (Emitter) is very low.

Fig. 7-6 RMS Symmetry Adjustment

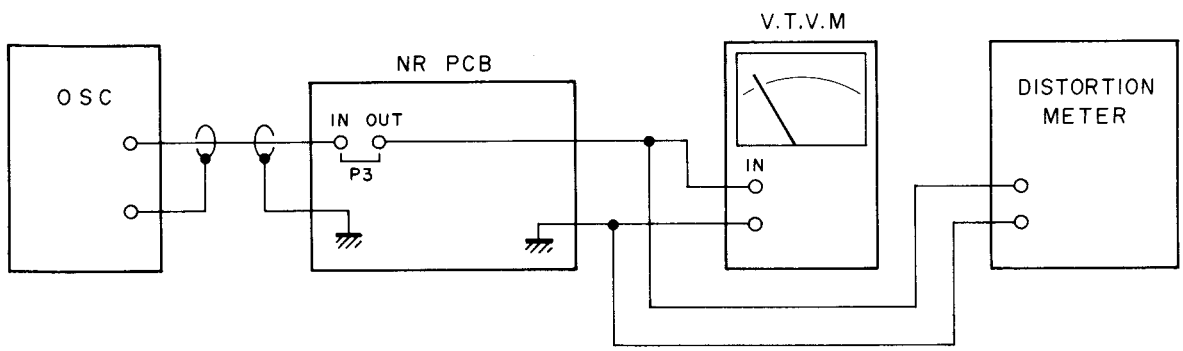


Fig. 7-7 VCA Symmetry and ZERO Point Adjustment

Input Levels	Output (DECODER) Levels
−15.5 dBm	−25.5 dBm
− 5.5 dBm	− 5.5 dBm
+ 4.5 dBm	+14.5 dBm

Chart 7-1

VIII. DC RESISTANCE OF HEADS

Description	DC Resistance
REC HEAD	50 ohms ± 10%
P.B HEAD	340 ohms ± 10%
ERASE HEAD	3.5 ohms ± 10%

IX. P.C BOARD TITLES AND IDENTIFICATION NUMBERS

P.C Board Title		P.C Board Number	Remark
PRE-AMP	P.C BOARD	T2058A504A	[J] [U]
PRE-AMP	P.C BOARD	T2058A505A	[C] [A]
PRE-AMP	P.C BOARD	T2058A506A	[E] [B] [S]
JACK	P.C BOARD	T2058A501B	
OUTPUT	P.C BOARD	T2058A501C	
REMOTE	P.C BOARD	T2058A501E	
SYSCON	P.C BOARD	T2058A502A	
METER	P.C BOARD	T2058A502B	
POWER SUPPLY	P.C BOARD	T2058A504D	[J] [U]
POWER SUPPLY	P.C BOARD	T2058A505D	[C] [A]
POWER SUPPLY	P.C BOARD	T2058A506D	[E] [B] [S]
NR	P.C BOARD	T2058B5030	
FLEXIBLE	P.C BOARD	CMR01A0240	
CONTROL	P.C BOARD	CMR01C189A	
CAM MOTOR PULSE	P.C BOARD	CMR01C189C	
CAM MOTOR DIRECTION	P.C BOARD	CMR01C189B	
LEAF SWITCH	P.C BOARD	CMR01C1490	
REEL ROTATION	P.C BOARD	CMR01D144D	
GUIDE DETECTOR	P.C BOARD	CMR01D0220	
DETECTOR (A)	P.C BOARD	CMR01D1290	
DETECTOR (B)	P.C BOARD	CMR01D1620	
HOUSING	P.C BOARD	CMR01D1430	

SECTION 2

PARTS LIST

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RECOMMENDED SPARE PARTS 19
1. MECHA CMR01 BLOCK 20
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3. SYSTEM CONTROL AND METER P.C BOARD BLOCK 23
4. NR P.C BOARD BLOCK 23
5. ASSEMBLY BLOCK. 24
6. FINAL ASSEMBLY BLOCK 26
INDEX 27

Resistors and Capacitors which are not listed in this parts list, please refer to COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no. model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.
4. How to read list

a) Mechanism Block

2. HEAD BASE BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1x	BH-T2023A320A	HEAD BASE BLOCK GX-F66R
2-2	HP-H2206A010A	HEAD R/P PR4-8FU C
2-3	ZS-477876	PAN20x03STL CMT
2-4	ZS-536488	BID20x08STL CMT
2-5	ZG-402895	CS ANGLE ADJUST SPRING

- SP (Service Parts) Classification
- A small "x" indicates the inability to show that particular part in the Photo or Illustration.
- This number corresponds with the individual parts index number in that figure
- This number corresponds with the Figure Number

b) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BA-T2034A070A	PC SYS CON BLK GX-F44R
6-IC1	EI-324536	IC HD14049BP
6-IC2	EI-336801	IC MB8841-564M
6-IC3	EI-331661	IC SN7405N
6-IC4	EI-336725	IC M54527P
6-TR1to4	ET-200985	TR 2SC2603 F,G
6-TR5to28	ET-554657	TR 2SA733A P,Q
6-D1	ED-318292	D SILICON H 1S2473T-77 T26
6-D2to4	ED-308952	D GERMA V 1K34A-LR F07
6-D5to10	ED-318292	D SILICON H 1S2473T-77 T26
6-X1	EI-318384	OSC X'TAL NC-18C 3.579545MHZ

- SP (Service Parts) Classification
- This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

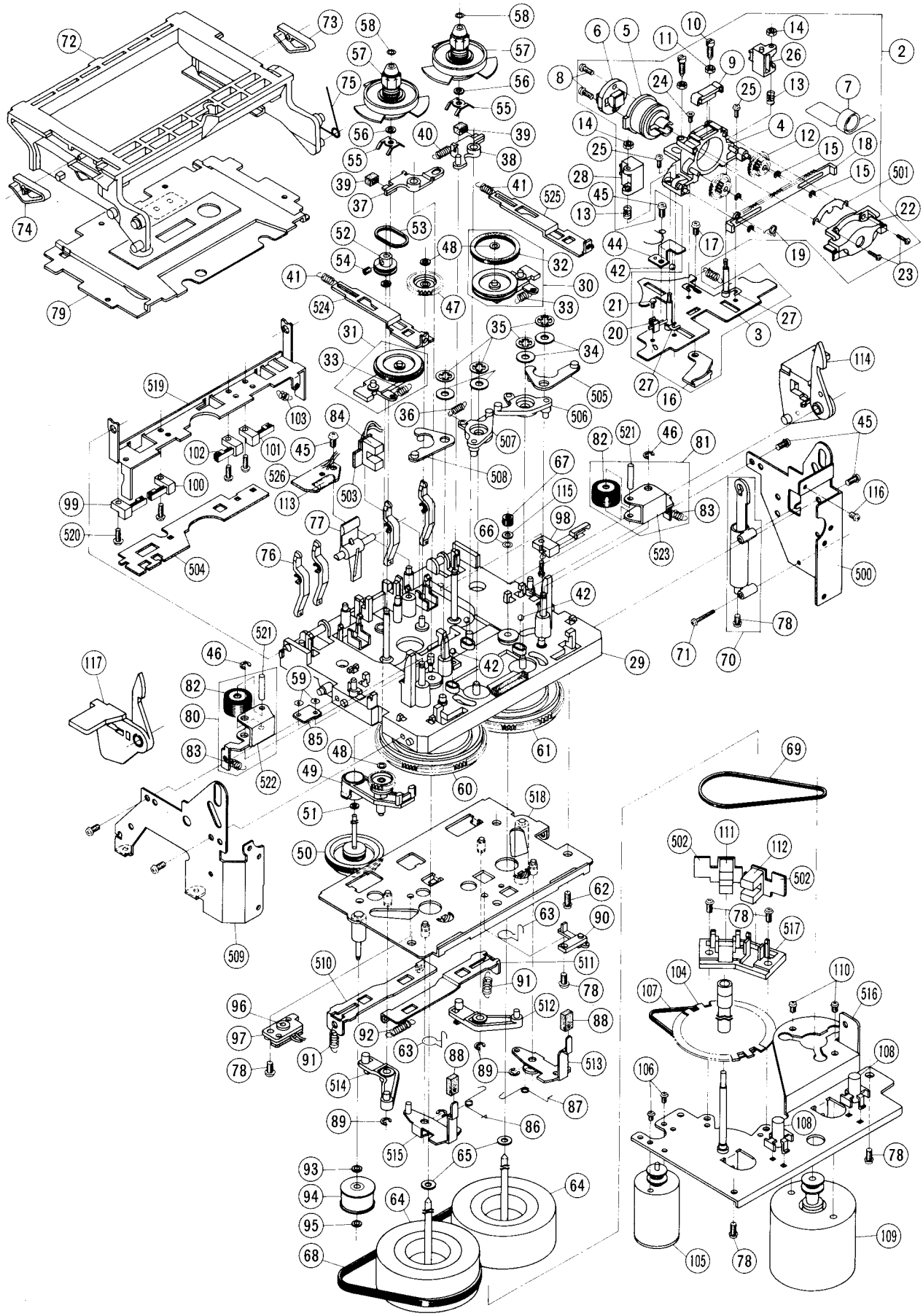
NO.		PARTS NO.	DESCRIPTION
1		BL-T2045A050A	ARM PINCH ROLLER (L) BLK HX-R5
2		BL-T2045A060A	ARM PINCH ROLLER (R) BLK HX-R5
3		BM-B604491	⚠ MOTOR (PULLEY) PART EG-510ED 2B2 (M902)
4		BM-B604490	⚠ MOTOR OPERATION (PULLEY) PART (M901)
5		BR-344098	REEL TABLE (A) ASSY
6		BT-349600	⚠ TRANS POWER T2058 (A,C)
7		BT-349602	⚠ TRANS POWER T2058 (B,S)
8		BT-349601	⚠ TRANS POWER T2058 (E,V)
9		BT-349599	⚠ TRANS POWER T2058 (J)
10		BT-349598	⚠ TRANS POWER T2058 (U)
11	N	ED-308953	D GERMA H 1K34A-LH S12
12		ED-310340	D LED GL350 INFRARED RAY
13		ED-330319	D SILICON DBA10B 100/1.0A
14		ED-349662	D SILICON DS135E-FA6 100/1.0A
15		ED-301911	D SILICON H DS448
16		ED-344280	D SILICON H GMA-01-FY2 F05
17		ED-624903	D SILICON H 1S2473
18		ED-347768	D SILICON V MC921 DOUBLE
19		ED-338092	D ZENER H HZ2FA F10 B1
20	N	ED-346504	D ZENER H HZ20FA F10 3
21		ED-346455	D ZENER H HZ27FA F10 A1
22	N	ED-346440	D ZENER H HZ5FA F10 B1
23	N	ED-346446	D ZENER H HZ5FA F10 C3
24	N	ED-346450	D ZENER H HZ6FA F10 B2
25	N	ED-346454	D ZENER H HZ6FA F10 C3
26	N	ED-346469	D ZENER H HZ9FA F10 B2
27	N	ED-346264	D ZENER V HZ11LS7 F05 B2
28		ED-348062	D ZENER V HZ15-2S7
29	N	ED-338454	D ZENER V HZ9C-2S7
30		EF-339906	⚠ FUSE SEMKO T 250V 0.25A (E,B,S)
31		EF-668474	⚠ FUSE SEMKO T 250V 0.40A (E,B,S)
32		EF-593706	⚠ FUSE SEMKO T 250V 0.50A (E,B,S)
33		EF-306125	⚠ FUSE TSC A 250V 0.31A (U,J)
34		EF-327103	⚠ FUSE TSC A 250V 0.50A (U,J)
35		EF-309388	⚠ FUSE TSC A 250V 0.80A (U,J)
36		EF-308848	⚠ FUSE TSC 125V 0.40A (C,A)
37		EF-309390	⚠ FUSE TSC 125V 0.50A (C,A)
38		EF-309391	⚠ FUSE TSC 125V 0.80A (C,A)
39		EH-351182	FILTER DB 201AK-005 100 KHZ
40		EH-351183	FILTER DB 201AK-006 19 KHZ
41		EI-330352	IC BA6109
42		EI-337845	IC BA6146 M
43		EI-349196	IC HA12058
44		EI-337013	IC LB1290
45		EI-345765	IC LB1292
46		EI-343417	IC LB1294
47	N	EI-337009	IC LC4049B
48		EI-345759	IC LC7530
49		EI-337008	IC LC7800
50		EI-348701	IC M51143L
51		EI-337228	IC M5218L0
52		EI-348785	IC M5220L
53		EI-348123	IC M5230AL
54		EI-349388	IC M54418P
55		EI-349877	IC T2055A
56		EI-344144	IC UPC1252H2
57		EI-344148	IC UPC1253H
58		EI-349372	OSC CE CSA4.00MG 4MHZ
59		EL-348214	PL LEAD 28.0V 24MA
60		EM-349595	IND FL FIP48AW11YS
61		EM-349594	IND FL FIP6GM7
62		EO-352104	COIL OSC 194-5009-01 100 KHZ
63		EO-315758	COIL TUN 1 100Z-431 100.00 KHZ
64		EO-337044	COIL TUN 1 102AK-005
65		EO-337055	COIL VARI 1 FE002S 10MH
66		EQ-337067	RELAY LEAD LAB2NS 2NO 18V
67		ES-305733	⚠ SW SELECTOR HXW0131-260 01-4 (U)
68		ES-344104	SW LEAF BSW-191 01-1 NO
69		ES-344101	SW LEAF MD-1003 01-1 NO
70		ES-336814	SW LEAF MSW-1150NBK 01-1 NO
71		ES-344253	SW LEAF MSW-1418J 01-1 NO
72		ES-344257	SW LEAF MSW-1418L 01-1 NO
73		ES-352105	SW PUSH ESB-62555 2-04-02
74		ES-347966	SW PUSH ESB-649 01-2-2 N
75		ES-344270	SW PUSH SDLD1P 01-1
76		ES-349597	SW SLIDE 00130329 BLACK 01-3 S (BL)
77		ES-349698	SW SLIDE 00130333 GRAY 01-3 S (EXCEPT BL)
78		ES-349640	SW TACT B3F-1050
79		ES-349367	SW TACT KHH10906
80		ET-344102	PHOTO SENSOR GP-1S04
81		ET-310341	PHOTO SENSOR PT350 T
82		ET-311977	PHOTO SENSOR SPI-201
83		ET-349609	TR FET 2SK381 C
84	N	ET-200558	TR 2SA1115 E,F
85		ET-346298	TR 2SA1246 S,T
86		ET-348950	TR 2SA1345
87		ET-349605	TR 2SA1346
88		ET-349626	TR 2SA1347
89		ET-349593	TR 2SA1348
90		ET-349718	TR 2SA1392 S,T
91		ET-352726	TR 2SA1392 T,U
92		ET-337968	TR 2SA999 E,F
93		ET-353067	TR 2SB744 P,Q,R
94	N	ET-309353	TR 2SC2274K E,F
95		ET-328578	TR 2SC2320 E,F
96	N	ET-200505	TR 2SC2603 E,F
97		ET-349606	TR 2SC3382 T,U
98		ET-349081	TR 2SC3383 S,T
99		ET-349608	TR 2SC3383 T,U
100		ET-350795	TR 2SC3399
101		ET-349592	TR 2SC3400
102	N	ET-328868	TR 2SD1012-V G,H
103	N	ET-307193	TR 2SD612K D,E,F
104		ET-310148	TR 2SD612K E,F
105	N	ET-307349	TR 2SD794 P,Q
106		ET-349979	TR 2SD794 P,Q,R
107	N	EV-345610	R S-FIX H H0811C307A 3P 102
108	N	EV-342939	R S-FIX H H0811C313A 3P 103
109		EV-350924	R S-FIX H H0811C351A 3P 104
110	N	EV-345611	R S-FIX H H0811C358A 3P 502
111	N	EV-342942	R S-FIX H H0811C362A 3P 503
112		EV-336785	R S-FIX H TM8KV2-1S 3P 0.50W 104
113		EV-351188	R S-FIX H VM6CKPVB 3P 0.30W 503
114		EV-351189	R S-FIX H VM6CKPVB 3P 0.30W 504
115		EV-522652	R S-FIX V V8K1-1 3P 105
116		EV-337841	VR SLIDE 30P2SV0A B103
117		HR-H2501A010A	HEAD COMBO EPR4-9
118		MB-344041	BELT CAPSTAN
119		MB-344042	BELT WIND (A)
120		MB-344043	BELT WIND (B)
121		MB-344028	PULLEY RUBBER
122		MB-345139	WHEEL RUBBER
123		MI-344095	IDLER PLAY (L) ASSY
124		MI-344094	IDLER PLAY (R) ASSY

"NOTE" N : New Parts

SYMBOL FOR DESTINATION

A: AAL (U.S.A)
B: UK (England)
C: CSA (Canada)
J: JPN (Japan)
S: SAA (Australia)
U: U/T (Universal Area)
E: CEE (Europe)

MECHA CMR01 BLOCK



1. MECHA CMR01 BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
1-1	BB-T2045A020B	MECHA CMR01 BLK GX-R6
1-2	BH-T2045A030B	HEAD BLK GX-R6
	HEAD BLOCK	
1-3	MZ-B344008	CHASSIS HEAD PART
1-4	HZ-B344009	HOUSING ROTARY PART
1-5	HZ-B344006	HOLDER ROTARY PART
1-6	HR-H2501A010A	HEAD COMBO EPR4-9
1-7	EA-343944	PC HEAD (B) CMR01A0240
1-8	ZS-245147	CTS20x06STL BNI
1-9	HZ-344011	GUIDE ROTARY HEAD
1-10	ZS-344001	SCREW AZIMUTH
1-11	ZW-273734	N20BRS NI3 1
1-12	MZ-344004	GEAR HEAD
1-13	ZG-344012	SP PUSH GUIDE TAPE
1-14	ZW-618884	N20STL CMT 1
1-15	ZW-391397	RING E120SUP CMT
1-16	MZ-344002	PLATE ADJUST
1-17	ZS-442585	BID26x04STL CMT
1-18	MZ-344007	RACK
1-19	ZG-344013	SP TORSION RACK
1-20	ES-344104	SW LEAF BSW-191 01-1 NO (SW901)
1-21	ZS-343125	BID14x03STL BNI
1-22	HZ-344015	COVER HOUSING
1-23	ZS-345773	BID17x06STL BNI
1-24	ZS-524812	CTS20x04STL CMT
1-25	ZS-608095	PAN20x05STL CMT
1-26	HZ-344093	GUIDE TAPE
1-27	ZW-344639A	SPACER ADJUST (A) 0.10MM
1-27	ZW-344639B	SPACER ADJUST (B) 0.15MM
1-27	ZW-344639C	SPACER ADJUST (C) 0.20MM
1-27	ZW-344639D	SPACER ADJUST (D) 0.25MM
1-27	ZW-344639E	SPACER ADJUST (E) 0.30MM
1-27	ZW-344639F	SPACER ADJSUT (F) 0.35MM
1-27	ZW-344639G	SPACER ADJUST (G) 0.40MM
1-27	ZW-344639H	SPACER ADJUST (H) 0.45MM
1-27	ZW-344639J	SPACER ADJUST (I) 0.50MM
1-28	BZ-T2045A040A	GUIDE DETECTION BLK HX-R5
	MECHA CMR01 BLOCK	
1-29	MZ-B344018	CHASSIS MECHA PART
1-30	MI-344094	IDLER PLAY (R) ASSY
1-31	MI-344095	IDLER PLAY (L) ASSY
1-32	MB-345139	WHEEL RUBBER
1-33	ZG-343195	SP PULL IDLER
1-34	ZW-268222	PW31x080x030STL CMT
1-35	ZW-329422	RING CS0300
1-36	ZG-312923	SP T1-3.2/0.2-11.2 T1-040
1-37	ML-344032	LEVER BRAKE (L)
1-38	ML-344033	LEVER BRAKE (R)
1-39	MB-344034	BRAKE RUBBER
1-40	ZG-312925	SP T1-3.2/0.2-14.0 T1-042
1-41	ZG-349016	SP PULL SLIDE
1-42	MV-666887	BALL 250STL
1-43	ZG-343193	SP PULL HEAD CHASSIS RETURN
1-44	MZ-344039	PLATE HEAD HOLD
1-45	ZS-336613	PT PAN26x06STL CMT
1-46	ZW-270088	RING E 190SUP CMT
1-47	MZ-344036	GEAR WIND (B)
1-48	ZW-343120	PW17x040x025PSL
1-49	ML-344096	ARM REWIND ASSY
1-50	TC-344097	WIND ASSY
1-51	ZW-305546	PW21x040x025PSL
1-52	MR-344037	PULLEY WIND
1-53	MB-344043	BELT WIND (B)
1-54	ZS-353047	–SET26x03STL CMT HP
1-55	ZG-344031	SP PLATE BT
1-56	ZW-381644	PW21x040x013PSL
1-57	BR-344098	REEL TABLE (A) ASSY
1-58	ZW-343120	PW17x040x025PSL
1-59	ZW-349046	WASHER FIXATION
1-60	MZ-344019	CAM WHEEL (L)
1-61	MZ-344020	CAM WHEEL (R)
1-62	ZS-336613	PT PAN26x06STL CMT
1-63	ZG-344064	SP PULL EARTH
1-64	BF-344029	FLYWHEEL
1-65	ZW-344047	SPACER FLYWHEEL
1-66	ZW-349047	WASHER OIL STOPPER
1-67	MB-344028	PULLEY RUBBER
1-68	MB-344041	BELT CAPSTAN
1-69	MB-344042	BELT WIND (A)
1-70	MZ-344099	DUMPER ASSY
1-71	ZS-343113	ST PAN20x12STL CMT
1-72	SP-344057	LID CASE
1-73	ZG-336615	SP PLATE CASSETTE HOLDER (B)
1-74	ZG-344939	SP PLATE CASSETTE HOLDER
1-75	ZG-344058A	SP TORSION LID (R)
1-76	ML-344286	LEVER DETECTION (A)
1-77	ML-344053	LEVER DETECTION (B)
1-78	ZS-321194	ST PAN26x05STL CMT
1-79	BD-B344049B	LID DECORATION (B) PART
1-80	BL-T2045A050A	ARM PINCH ROLLER (L) BLK HX-R5
1-81	BL-T2045A060A	ARM PINCH ROLLER (R) BLK HX-R5
1-82	MP-336153	PINCH ROLLER (A)
1-83	ZG-344089	SP PULL PINCH ROLLER
1-84	ET-311977	PHOTO SENSOR SPI-201
1-85	ET-310341	PHOTO SENSOR PT350 T (TR902)
1-86	ZG-345660	SP TORTION RETURN (L)
1-87	ZG-345661	SP TORTION RETURN (R)
1-88	MB-349019	RUBBER ARM RETURN
1-89	ZW-270088	RING E 190SUP CMT
1-90	ES-344101	SW LEAF MD-1003 01-1 NO (SW905)
1-91	ZG-344090	SP PULL DRIVE ARM
1-92	ZG-312945	SP T1-3.2/0.29-14.0 T1-061
1-93	ZW-305546	PW21x040x025PSL
1-94	MR-B344076	PULLEY MIDDLE PART
1-95	ZW-343120	PW17x040x025PSL
1-96	ED-310340	D LED GL350 INFRARED RAY (D902)
1-97	TC-344062	HOLDER STOP SENSOR
1-98	ES-336814	SW LEAF MSW-1150NBK 01-1 NO (SW902)
1-99	ES-344257	SW LEAF MSW-1418L 01-1 NO (SW903)
1-100	ES-344253	SW LEAF MSW-1418J 01-1 NO (SW904)
1-101	ES-344257	SW LEAF MSW-1418L 01-1 NO (SW906)
1-102	ES-344253	SW LEAF MSW-1418J 01-1 NO (SW907)
1-103	ZG-344091	SP PULL HOLDER
1-104	MR-344080	PULLEY CAM SLIT
1-105	BM-B604490	⚠ MOTOR OPERATION (PULLEY) PART (M901)
1-106	ZS-477876	PAN20x03STL CMT
1-107	MB-344088	BELT CAM
1-108	MZ-344083	HOLDER THRUST
1-109	BM-B604491	⚠ MOTOR (PULLEY) PART EG-510ED 2B2 (M902)
1-110	ZS-592378	PAN26x03STL CMT
1-111	ET-344102	PHOTO SENSOR GP-1S04 (PH2)
1-112	ET-344102	PHOTO SENSOR GP-1S04 (PH3)
1-113	EL-348214	PL LEAD 28.0V 24MA
1-114	ML-344055	ARM LOCK (R)
1-115	SZ-349017	FELT CAPSTAN
1-116	ZS-201475	PAN20x03STL NI3
1-117	ML-344056	ARM LOCK (L)
	CONTROL P.C BOARD	
1-118x	ER-333698	⚠ R CB H S15 FS RDS 1/2W 821J (R4)

NOTE: Parts listed in 1 to 118 on the exploded view and list are normaly stocked for replacement purpose.
The remaining parts shown in this manual are not normaly stocked, because they are not seldom required for routine service.

2. PRE AMP AND POWER SUPPLY P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
2-1U	BA-T2058A020A	PC PRE AMP/POWER BLK GX-R66 (U) (U,J)
2-1C	BA-T2058A020C	PC PRE AMP/POWER BLK GX-R66 (C) (C,A)
2-1E	BA-T2058A020D	PC PRE AMP/POWER BLK GX-66 (E) (E,B,S)
	PRE AMP P.C BOARD	
2-IC1	EI-349196	IC HA12058
2-IC2	EI-349388	IC M54418P
2-IC4,5	EI-348785	IC M5220L
2-IC6to8	EI-337228	IC M5218L0
2-IC9	EI-348701	IC M51143L
2-TR3	ET-307349	TR 2SD794 P,Q
2-TR5	ET-328868	TR 2SD1012-V G,H
2-TR6	ET-346298	TR 2SA1246 S,T
2-TR7to9	ET-350795	TR 2SC3399
2-TR10	ET-200558	TR 2SA1115 E,F
2-TR11,13	ET-328868	TR 2SD1012-V G,H
2-TR14	ET-349605	TR 2SA1346
2-TR15	ET-200505	TR 2SC2603 E,F
2-TR16	ET-349605	TR 2SA1346
2-TR17	ET-200505	TR 2SC2603 E,F
2-TR18	ET-328868	TR 2SD1012-V G,H
2-TR19to24	ET-349606	TR 2SC3382 T,U
2-TR27to29	ET-309353	⚠ TR 2SC2274K E,F
2-TR30	ET-349608	⚠ TR 2SC3383 T,U
2-TR31	ET-328578	⚠ TR 2SC2320 E,F
2-TR32	ET-337968	TR 2SA999 E,F
2-TR33	ET-349592	TR 2SC3400
2-TR34	ET-200505	TR 2SC2603 E,F
2-TR35	ET-328868	⚠ TR 2SD1012-V G,H
2-TR37	ET-352726	TR 2SA1392 T,U
2-D5to7	ED-344280	D SILICON H GMA-01-FY2 F05
2-D8	ED-301911	D SILICON H DS448
2-D9	ED-346440	D ZENER H HZ5FA F10 B1
2-D10	ED-308953	D GERMA H 1K34A-LH S12
2-D11	ED-301911	D SILICON H DS448
2-D12	ED-348062	⚠ D ZENER V HZ15-2S7
2-D13	ED-301911	D SILICON H DS448
2-D14	ED-344280	D SILICON H GMA-01-FY2 F05
2-D15,16	ED-301911	D SILL CON H DS448
2-RL1	EQ-337067	RELAY LEAD LAB2NS 2NO 18V
2-VR1	EV-342939	R S-FIX H H0811C313A 3P 103
2-VR2	EV-345610	R S-FIX H H0811C307A 3P 102
2-VR3	EV-345611	R S-FIX H H0811C358A 3P 502
2-VR4	EV-342939	R S-FIX H H0811C313A 3P 103
2-VR5	EV-342942	R S-FIX H H0811C362A 3P 503
2-VR6	EV-350924	R S-FIX H H0811C351A 3P 104
2-VR7	EV-336785	R S-FIX H TM8KV2-1S 3P 0.50W 104
2-VL1	EO-337055	COIL VARI 1 FE002S 10MH
2-L1	EO-669273	COIL FIX 2 FL5R200 180
2-T1	EO-352104	COIL OSC 1 94-5009-01 100KHZ
2-FL1	EH-351182	FILTER DB 201AK-005 100KHZ
2-FL2	EH-351183	FILTER DB 201AK-006 19KHZ
2-FL3	EO-337044	COIL TUN 1 102AK-005
2-FL4	EO-315758	COIL TUN 1 100Z-431 100.00KHZ
2-C3	EC-347216	C MC V F05 FM 330J 500DC
2-C35	EC-314992	C STY V F05 CQF09 681J 50DC
2-C36	EC-347205	C MC V F05 FM 220J 500DC
2-C46	EC-306419	C STY V F05 500 681J 50DC
2-C55	EC-347216	C MC V F05 FM 330J 500DC
2-C64	EC-347187	C MC V F05 FM 5R0D 500DC
2-C67	EC-308965	C STY V F05 CQO9S 152J 500DC
2-C71	EC-307684	C EC V F05 NP SM R47M 50DC
2-C72	EC-307167	C EC V F05 LL 100 16.0DC
2-C75	EC-347471	C PP V F05 PP 471J 50DC
2-J1	EJ-347664	PIN J YKC21-5053 P 4P
	JACK P.C BOARD	
2-J1B	EJ-345812	PHONE J HLJ0527-3714
2-J2B	EJ-344640	PHONE J HLJ4308-3034

REF. NO.	PARTS NO.	DESCRIPTION
	OUTPUT P.C BOARD	
2-VR1C	EV-337841	VR SLIDE 30P2SV0A B103
	POWER SUPPLY P.C BOARD	
2-TR1D	ET-200505	⚠ TR 2SC2603 E,F
2-TR2D	ET-200558	TR 2SA1115 E,F
2-TR3D	ET-309353	⚠ TR 2SC2274K E,F
2-TR4D	ET-310148	⚠ TR 2SD612K E,F
2-TR5D	ET-349081	⚠ TR 2SC3383 S,T
2-TR6D	ET-349979	⚠ TR 2SD794 P,Q,R
2-TR7D	ET-349718	⚠ TR 2SA1392 S,T
2-TR8D	ET-353067	⚠ TR 2SB744 P,Q,R
2-D1D	ED-330319	⚠ D SILICON DBA10B 100/1.0A
2-D2D	ED-349662	⚠ D SILICON DS135E-FA6 100/1.0A
2-D3D	ED-346450	D ZENER H HZ6FA F10 B2
2-D4D	ED-344280	D SILICON H GMA-01-FY2 F05
2-D5D	ED-338092	D ZENER H HZ2FA F10 B1
2-D6D	ED-346454	D ZENER H HZ6FA F10 C3
2-D7D	ED-346454	⚠ D ZENER H HZ6FA F10 C3
2-D8D	ED-330319	D SILICON DBA10B 100/1.0A
2-D9D,10D	ED-349662	⚠ D SILICON DS135E-FA6 100/1.0A
2-D11D	ED-344280	D SILICON H GMA-01-FY2 F05
2-D12D	ED-346264	⚠ D ZENER V HZ11LS7 F05 B2
2-D13D	ED-349662	⚠ D SILICON DS135E-FA6 100/1.0A
2-D14D	ED-346446	D ZENER H HZ5FA F10 C3
2-D15D	ED-344280	D SILICON H GMA-01-FY2 F05
2-D16D	ED-346264	⚠ D ZENER V HZ11LS7 F05 B2
2-D17Dto19D	ED-344280	D SILICON H GMA-01-FY2 F05
2-D20D,21D	ED-301911	D SILICON H DS448
2-SW1D	ES-344270	⚠ SW PUSH SDLD1P 01-1
2-C1D	EC-338396	⚠ C MMY V ECQEW 473M 250AC
	REMOTE P.C BOARD	
2-J2E	EJ-346076	DIN J TCS4690-01-1111 P 8P

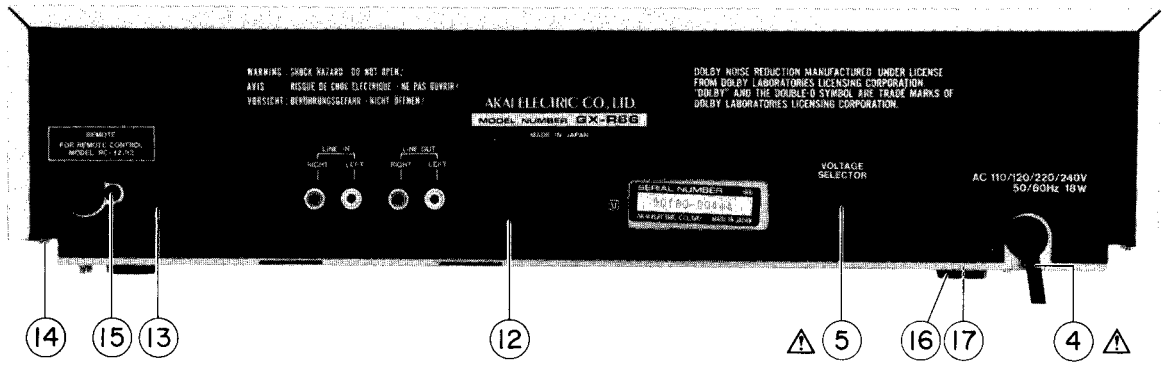
3. SYSTEM CONTROL AND METER P.C BOARD BLOCK

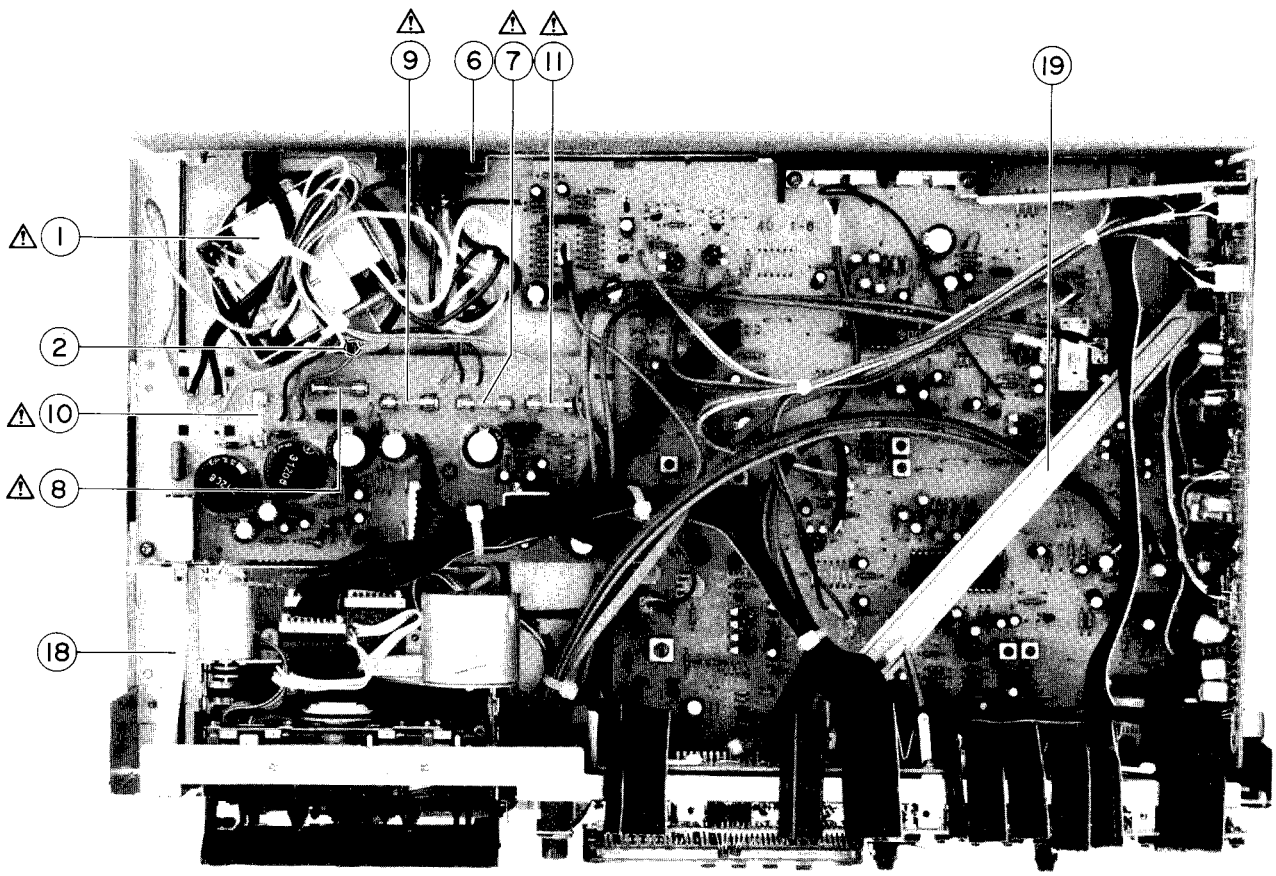
REF. NO.	PARTS NO.	DESCRIPTION
3-1	BA-T2058A030A	PC SYSCON/METER BLK GX-R66
3-1B	BA-T2058A030E	PC SYSCON METER/BLK GX-R66-B (BLACKMODEL)
	SYSTEM CONTROL P.C BOARD	
3-IC1	EI-349877	IC T2055A
3-IC2,3	EI-337008	IC LC 7800
3-IC4	EI-337009	ICLC4049B
3-IC5	EI-345759	IC LC7530
3-IC6	EI-330352	IC BA6109
3-IC7	EI-345765	IC LB1292
3-TR1,2	ET-349592	TR 2SC3400
3-TR3	ET-348950	TR 2SA1345
3-TR4	ET-349592	TR 2SC3400
3-TR5	ET-200505	TR 2SC2603 E,F
3-TR6	ET-200558	TR 2SA1115 E,F
3-TR7,8	ET-200505	TR 2SC2603 E,F
3-TR9	ET-307193	⚠ TR-2SD612K D,E,F
3-TR11,12	ET-200505	TR 2SC2603 E,F
3-D1	ED-349662	D SILICON DS135E-FA6 100/1.0A
3-D2	ED-344280	D SILICON H GMA-01-FY2 F05
3-D3	ED-346504	⚠ D ZENER H HZ20FA F10 3
3-D5	ED-338454	D ZENER V HZ9C-2S7
3-D6to8	ED-349662	D SILICON DS135E-FA6 100/1.0A
3-D9	ED-344280	D SILICON H GMA-01-FY2 F05
3-D13	ED-624903	D SILICON H 1S2473
3-D14	ED-346469	D ZENER H HZ9FA F10 B2
3-D15	ED-344280	D SILICON H GMA-01-FY2 F05
3-D16	ED-346455	D ZENER H HZ27FA F10 A1
3-X1	EI-349372	OSC CE CSA4.00MG 4MHZ
3-VR1	EV-522652	R S-FIX V V8K1-1 3P 105
3-CR2	EH-349374	COMP R RKC1/8B8 4.7KJ
3-CR3	EH-349375	COMP R M3806
3-C5	EC-200983	C STY V F05 500 101K 50DC
	METER P.C BOARD	
3-IC1B	EI-337013	IC LB1290
3-IC3B,4B	EI-337845	IC BA6146 M
3-IC5B,6B	EI-343417	IC LB1294
3-TR1B	ET-349592	TR 2SC3400
3-TR2B	ET-349593	TR 2SA1348
3-D1Bto3B	ED-624903	D SILICON H 1S2473
3-SW1Bto8B	ES-349367	SW TACT KHH10906
3-SW9B	ES-349640	SW TACT B3F-1050
3-SW10Bto30B	ES-349367	SW TACT KHH10906
3-SW31B	ES-349698	SW SLIDE 00130333 GRAY 01-3 S (EXCEPT BL)
3-SW31B	ES-349597	SW SLIDE 00130329 BLACK 01-3 S (BL MODEL)
3-SW32Bto34B	ES-347966	SW PUSH ESB-649 01-2-2 N
3-IN1B	EM-349594	IND FL FIP6GM7
3-IN2B	EM-349595	IND FL FIP48AW11YS

4. NR P.C BOARD BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
4-1	BA-T2058A040A	PC NR BLK GX-R66
	NR P.C BOARD	
4-IC1	EI-344144	IC UPC1252H2
4-IC2	EI-344148	IC UPC1253H
4-IC4	EI-337228	IC M5218L0
4-IC5	EI-348123	IC M5230AL
4-TR1to5	ET-349609	TR FET 2SK381 C
4-TR6to11	ET-349608	TR 2SC3383 T,U
4-TR12,13	ET-349609	TR FET 2SK381 C
4-TR14	ET349608	TR 2SC3383 T,U
4-TR15	ET-349626	TR 2SA1347
4-TR16	ET-349605	TR 2SA1346
4-TR17	ET-349592	TR 2SC3400
4-TR18,19	ET-349606	TR 2SC3382 T,U
4-D1	ED-347768	D SILICON V MC921 DOUBLE
4-D2to13	ED-344280	D SILICON H GMA-01-FY2 F05
4-SW1	ES-352105	SW PUSH ESB-62555 2-04-02
4-VR1,2	EV-351188	R S-FIX H VM6CKPVB 3P 0.30W 503
4-VR3	EV-351189	R S-FIX H VM6CKPVB 3P 0.30W 504
4-R42	ER-352417	R MF H F10 1/4W 9103F
4-R43	ER-352418	R MF H F10 1/4W 6R20F
4-R59,60	ER-305128	R MF H F10 1/4W 1502F
4-R61	ER-311773	R MF H 1/4W 3301F
4-R62	ER-323374	R MF H F10 1/4W 1302F
4-R63	ER-351201	R MF H F10 1/4W 1501F
4-C3	EC-300193	C EC V F05 NP SM 100M 16DC
4-C7	EC-312011	C STY V SNP CQFS 201J 50DC
4-C9,10	EC-314990	C STY V SNP CQFS 101J 50DC
4-C12	EC-300193	C EC V F05 NP SM 100M 16DC
4-C15	EC-307494	C STY V F05 CQ09S 331J 50DC
4-C28	EC-314990	C STY V SNP CQFS 101J 50DC

ASSEMBLY BLOCK

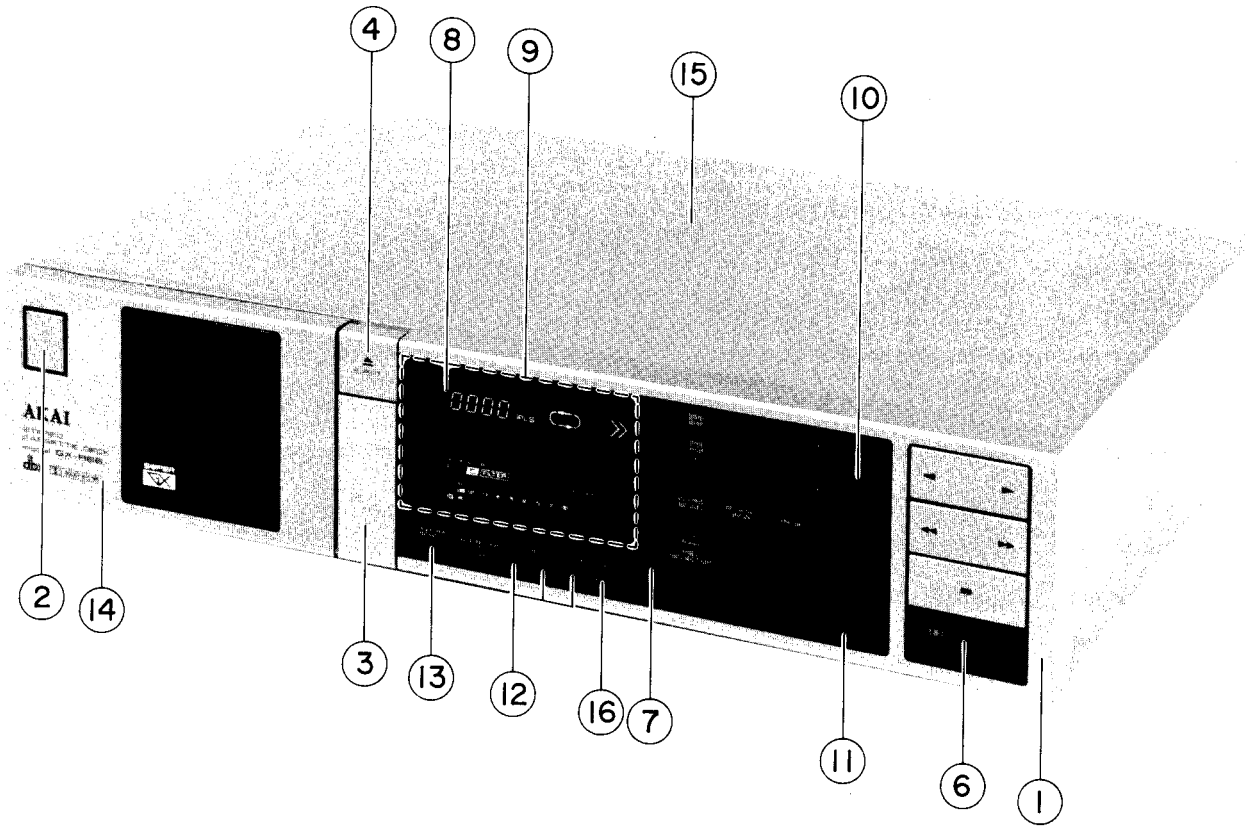




5. ASSEMBLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
5-1U	BT-349598	⚠ TRANS POWER T2058 (U) (T901)
5-1J	BT-349599	⚠ TRANS POWER T2058 (J) (T901)
5-1C	B -349600	⚠ TRANS POWER T2058 (A,C) (T901)
5-1E	BT-349601	⚠ TRANS POWER T2058 (E,V) (T901)
5-1B	BT-349602	⚠ TRANS POWER T2058 (B,S) (T901)
5-2	ZS-314702	ST BID40x10STL CMT
5-3x	ZW-413188	N40STL CMT 1
5-4U	EW-347683	⚠ AC CORD 2 CORES VM0129, VFF-CB U/T (U)
5-4J	EW-347836	⚠ AC CORD 2 CORES KP-209 VFF-CB J (J)
5-4C	EW-348215	⚠ AC CORD 2 CORES KP10, SPT1 105CCB UC (C,A)
5-4E	EW-347682	⚠ AC CORD 2 CORES VM0364, FC3097-CB EV (E)
5-4B	EW-347680	⚠ AC CORD 2 CORES LCFL2x 0.75-CB B (B)
5-4S	EW-347681	⚠ AC CORD 2 CORES VM0436, FC3093-CB S (S)
5-5	ES-305733	⚠ SW SELECTOR H XW0131-260 01-4 (U)
5-6	ZS-348375	ST BR30x08STL CMT (U)
5-7U	EF-327103	⚠ FUSE TSC A 250V 0.50A (F1) (U,J)
5-7C	EF-309390	⚠ FUSE TSC 125V 0.50A (F1) (C,A)
5-7E	EF-668474	⚠ FUSE SEMKO T 250V 0.40A (F1) (E,B,S)
5-8U	EF-327103	⚠ FUSE TSC A 250V 0.50A (F2) (U,J)
5-8C	EF-309390	⚠ FUSE TSC 125V 0.50A (F2) (C,A)
5-8E	EF-593706	⚠ FUSE SEMKO T 250V 0.50A (F2) (E,B,S)
5-9U	EF-306125	⚠ FUSE TSC A 250V 0.31A (F3) (U,J)
5-9C	EF-308848	⚠ FUSE TSC 125V 0.40A (F3) (C,A)
5-9E	EF-339906	⚠ FUSE SEMKO T 250V 0.25A (F3) (E,B,S)
5-10U	EF-309388	⚠ FUSE TSC A 250V 0.80A (F4) (U,J)
5-10C	EF-309391	⚠ FUSE TSC 125V 0.80A (F4) (C,A)
5-10E	EF-593706	⚠ FUSE SEMKO T 250V 0.50A (F4) (E,B,S)
5-11U	EF-327103	⚠ FUSE TSC A 250V 0.50A (F5) (U,J)
5-11C	EF-309390	⚠ FUSE TSC 125V 0.50A (F5) (C,A)
5-11E	EF-668474	⚠ FUSE SEMKO T 250V 0.40A (F5) (E,B,S)
5-12U	SP-351185A	PANEL REAR BORD GX-R66 (U)
5-12J	SP-351185B	PANEL REAR BORD GX-R66 (J)
5-12C	SP-351185C	PANEL REAR BORD GX-R66 (A,C)
5-12E	SP-351185D	PANEL REAR BORD GX-R66 (E)
5-12B	SP-351185F	PANEL REAR BORD GX-R66 (B,S)
5-13	ZS-352120	T2BR30x08STL BCM C080
5-14	ZS-455207	T2BR30x05STL CMT
5-15	ZW-698308	RV NYL30x055 BL
5-16	SA-349332	FOOT
5-17	ZS-313486	ST PAN30x06STL CMT C
5-18	MZ-349534	JOINT POWER
5-19	MZ-349527	JOINT NR
5-20x	ZG-312926	SP T1-3.2/0.2-16.0 T1-043
5-21x	MZ-351564	BUSH NR
5-22x	ZW-305013	RV POP32 (A)

FINAL ASSEMBLY BLOCK



6. FINAL ASSEMLY BLOCK

REF. NO.	PARTS NO.	DESCRIPTION
6-1	BD-T2058A050A	PANEL FRONT BLK GX-R66
6-1P	BD-T2058A050B	PANEL FRONT BLK GX-R66-P (EXCEPT J)
6-1B	BD-T2058A050C	PANEL FRONT BLK GX-R66-B
6-2	SK-343017G	KNOB POWER
6-2P	SK-343017B	KNOB POWER-P
6-2B	SK-343017F	KNOB POWER-B
6-3	SP-349517A	PANEL DOOR
6-3P	SP-349517B	PANEL DOOR-P
6-3B	SP-349517C	PANEL DOOR-B
6-4	SK-349513A	KNOB EJECT
6-4P	SK-349513B	KNOB EJECT-P
6-4B	SK-349513C	KNOB EJECT-B
6-5x	ZG-313182	SP C-4.5/0.35-25.0 C-029
6-6	SK-349516G	KNOB OPERATE (D)
6-6B	SK-349516L	KNOB OPERATE (D)-B
6-7	SP-B349524	PANEL TEN KEY (A) PART
6-7B	SP-B349524B	PANEL TEN KEY (A)-2 PART
6-8	SP-349520A	WINDOW METER (1)
6-8B	SP-349520D	WINDOW METER (1)-B
6-9	SE-353076	WIND FILTER
6-10	SK-349519B	KNOB RANDOM-P
6-10B	SK-349519C	KNOB RANDOM-B
6-11	SK-343009E	KNOB OUTPUT-P2
6-11B	SK-343009C	KNOB OUTPUT-B
6-12	SK-349518A	KNOB DOLBY
6-12B	SK-349518B	KNOB DOLBY-B
6-13	SK-349512A	KNOB RESET
6-13B	SK-349512B	KNOB RESET-B
6-14	BD-B349521E	LID PANEL (3) PART
6-14P	BD-B349521F	LID PANEL (3)-P PART
6-14B	BD-B349521G	LID PANEL (3)-B PART
6-15	SP-344591A	COVER UPPER
6-15P	SP-344591B	COVER UPPER P
6-15B	SP-344591D	COVER UPPER-B-(2)
6-16	SK-349518C	KNOB DOLBY G

SYMBOL FOR COLOR VARIATION

NONE – SILVER
P – PEARL SHADOW
B or BL – BLACK

INDEX

PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.	PARTS NO.	REF. NO.
BA-T2058A020A	2-1U	ED-344280	4-D11	EO-315758	2-FL4	ET-328578	2-TR31
BA-T2058A020C	2-1C	ED-344280	4-D4	EO-337044	2-FL3	ET-328868	2-TR18
BA-T2058A020D	2-1E	ED-344280	4-D7	EO-337055	2-VL1	ET-328868	2-TR11
BA-T2058A030A	3-1	ED-344280	4-D2	EO-352104	2-T1	ET-328868	2-TR35
BA-T2058A030E	3-1B	ED-344280	4-D12	EO-669273	2-L1	ET-328868	2-TR5
BA-T2058A040A	4-1	ED-346264	2-D16D	EQ-337067	2-RL1	ET-328868	2-TR13
BA-T2045A020B	1-1	ED-346264	2-D12D	ER-305128	4-R60	ET-337968	2-TR32
BD-B344049B	1-79	ED-346440	2-D9	ER-305128	4-R59	ET-344102	1-112
BD-B349521E	6-14	ED-346446	2-D14D	ER-311773	4-R61	ET-344102	1-111
BD-B349521F	6-14P	ED-346450	2-D3D	ER-323374	4-R62	ET-346298	2-TR6
BD-B349521G	6-14B	ED-346454	2-D7D	ER-333698	1-118x	ET-348950	3-TR3
BD-T2058A050A	6-1	ED-346454	2-D6D	ER-351201	4-R63	ET-349081	2-TR5D
BD-T2058A050B	6-1P	ED-346455	3-D16	ER-352417	4-R42	ET-349592	2-TR33
BD-T2058A050C	6-1B	ED-346469	3-D14	ER-352418	4-R43	ET-349592	3-TR1
BF-344029	1-64	ED-346504	3-D3	ES-305733	5-5	ET-349592	3-TR2
BH-T2045A030B	1-2	ED-347768	4-D1	ES-336814	1-98	ET-349592	3-TR4
BL-T2045A050A	1-80	ED-348062	2-D12	ES-344101	1-90	ET-349592	3-TR1B
BL-T2045A060A	1-81	ED-349662	2-D10D	ES-344104	1-20	ET-349592	4-TR17
BM-M604490	1-105	ED-349662	2-D9D	ES-344253	1-100	ET-349593	3-TR2B
BM-B604491	1-109	ED-349662	2-D13D	ES-344253	1-102	ET-349605	2-TR16
BR-344098	1-57	ED-349662	2-D2D	ES-344257	1-101	ET-349605	2-TR14
BT-349598	5-1U	ED-349662	3-D1	ES-344257	1-99	ET-349605	4-TR16
BT-349599	5-1J	ED-349662	3-D8	ES-344270	2-SW1D	ET-349606	2-TR19
BT-349600	5-1C	ED-349662	3-D7	ES-347966	3-SW34B	ET-349606	2-TR22
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EA-343944	1-7	ED-624903	3-D1B	ES-349367	3-SW15B	ET-349606	2-TR24
EC-200983	3-C5	ED-624903	3-D2B	ES-349367	3-SW13B	ET-349606	4-TR18
EC-300193	4-C3	EF-306125	5-9U	ES-349367	3-SW1B	ET-349606	4-TR19
EC-300193	4-C12	EF-308848	5-9C	ES-349367	3-SW12B	ET-349608	2-TR30
EC-3064419	2-C46	EF-309388	5-10U	ES-349367	3-SW6B	ET-349608	4-TR7
EC-307167	2-C72	EF-309390	5-7C	ES-349367	3-SW2B	ET-349608	4-TR6
EC-307494	4-C15	EF-309390	5-11C	ES-349367	3-SW29B	ET-349608	4-TR11
EC-307684	2-C71	EF-309390	5-8C	ES-349367	3-SW11B	ET-349608	4-TR10
EC-308965	2-C67	EF-309391	5-10C	ES-349367	3-SW8B	ET-349608	4-TR9
EC-312011	4-C7	EF-327103	5-11U	ES-349367	3-SW7B	ET-349608	4-TR14
EC-314990	4-C10	EF-327103	5-7U	ES-349367	3-SW10B	ET-349608	4-TR8
EC-314990	4-C9	EF-327103	5-8U	ES-349367	30SW28B	ET-349609	4-TR2
EC-314990	4-C28	EF-339906	5-9E	ES-349367	3-SW30B	ET-349609	4-TR3
EC-314992	2-C35	EF-593706	5-10E	ES-349367	3-SW27B	ET-349609	4-TR13
EC-338396	2-C1D	EF-593706	5-8E	ES-349367	3-SW26B	ET-349609	4-TR12
EC-347187	2-C64	EF-668474	5-11E	ES-349367	3-SW25B	ET-349609	4-TR4
EC-347205	2-C36	EF-668474	5-7E	ES-349367	3-SW22B	ET-349609	4-TR1
EC-347216	2-C3	EH-349374	3-CR2	ES-349367	3-SW20B	ET-349609	4-TR5
EC-347216	2-C55	EH-349375	3-CR3	ES-349367	3-SW19B	ET-349626	4-TR15
EC-347471	2-C75	EH-351182	2-FL1	ES-349367	3-SW24B	ET-349718	2-TR7D
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ED-301911	2-D20D	EI-337008	3-IC3	ES-349367	3-SW16B	ET-350795	2-TR8
ED-301911	2-D11	EI-337008	3-IC2	ES-349367	3-SW5B	ET-350795	2-TR9
ED-301911	2-D16	EI-337009	3-IC4	ES-349367	3-SW14B	ET-352726	2-TR37
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ED-308953	2-D10	EI-337228	2-IC7	ES-349367	3-SW3B	EV-337841	2-VR1C
ED-310340	1-96	EI-337228	2-IC6	ES-349597	3-SE31B	EV-342939	2-VR4
ED-330319	2-D8D	EI-337228	4-IC4	ES-349640	3-SW9B	EV-342939	2-VR1
ED-330319	2-D1D	EI-337845	3-IC3B	ES-349698	3-SW31B	EV-342942	2-VR5
ED-338092	2-D5D	EI-337845	3-IC4B	ES-352105	4-SW1	EV-345610	2-VR2
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ED-344280	2-D7	EI-348785	2-IC4	ET-200505	3-TR7	EW-347682	5-4E
ED-344280	2-D6	EI-348785	2-IC5	ET-200558	2-TR10	EW-347683	5-4U
ED-344280	2-D14	EI-349196	2-IC1	ET-200558	2-TR2D	EW-347836	5-4J
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MB-349019	1-88	ZG-344089	1-83				
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AKAI

WERKSTATTHANDBUCH

Da dieses Wartungshandbuch bereits auf Englisch veröffentlicht ist und Einstell- und Zeichnungshinweise auf Deutsch enthält, empfiehlt es sich, diese Ausgabe des Handbuchs zusammen mit der bereits veröffentlichten englischen Ausgabe und den Stromlaufplänen zu verwenden.

STEREOCASSETTENDECK

MODEL GX-R66

I. TECHNISCHE DATEN

SPURSYSTEM	4-Spur 2-Kanal-Stereosystem
CASSETTE	Philips-Kompaktcassette
TONKÖPFE	Ein Löschkopf Twin field super GX Kopf für Aufnahme und Wiedergabe
MOTOREN	1 elektronisch gesteuerter Gleichstrommotor für den Capstanantrieb 1 Gleichstrommotor für das Kurvenrad
GLEICHLAUFSCHWANKUNGEN	±0,07% W.peak (EIAJ) 0,05% (W.RMS) 0,12% (DIN)
FREQUENZGANG	Normal: 20 bis 17.000Hz ±3dB (EIAJ) CrO_2: 20 bis 18.000Hz ±3dB (EIAJ) Reineisenband: 20 bis 19.000Hz ±3dB (EIAJ)
GERÄUSCHSPANNUNG	60dB 56dB (EIAJ) Dolby B ON: Verbesserung um bis zu 5dB bei 1 kHz, 10dB über 5kHz Dolby C ON: Verbesserung um bis zu 15dB bei 500kHz, 20dB bei 1 kHz bis 10kHz
DYNAMIKUMFANG (dbx ON)	115 dB
KLIRRFAKTOR	0,65% (Reineisenband) 0,55% (Reineisenband) 0,25% (CrO_2) 0,15% (Normal)
EINGANG	LINE: 410mV/47kOhm
AUSGANG	LINE: 410mV/ 1 kOhm
LEISTUNGSAUFNAHME	100V, 50/60Hz für Japan 120V, 60Hz für USA und Canada 220V, 50Hz für Europa außer GB 240V, 50Hz für GB und Australien 110V/120V/220V/240V, 50/60 Hz umschaltbar für andere Länder
ABMESSUNGEN	440(B) x 105(H) x 288(T) mm (17,3 x 4,1 x 11,3 inches)
GEWICHT	5,0kg(11 lbs)

* Änderungen von technischen Daten und Design zwecks Verbesserung vorbehalten.

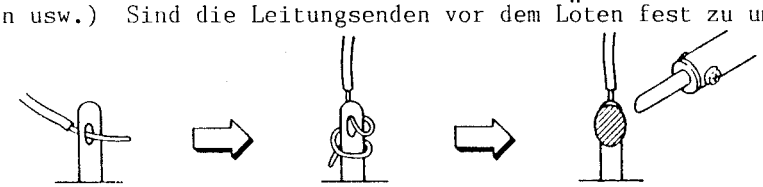
* Das Rauschunterdrückungs-System wird unter Lizenz von Dolby Laboratories Licensing Corporation gefertigt. "Dolby" und das Double-D-Zeichen sind Warenzeichen von Dolby Laboratories Licensing Corporation.

* "dbx" ist ein Warenzeichen von dbx Incorporated.

II. SICHERHEITSANWEISUNG

SICHERHEITSPRÜFUNG NACH DER REPARATUR
Überprüfen Sie, ob der Isolationswidersatand zwischen den Stiften des Netzsteckers sowie allen äußeren Teilen des Gerätes über 10 MOhm liegt. Bei Geräten mit Anschluß von Außenantenne (Tuner, Empfänger usw.), welche für [C] oder [A] bestimmt sind, muß der Isolationswiderstand über 2,2 MOhom liegen (Masse-Anschlüsse, Mikrofonbuchsen, Kopfhörerbuchsen, line-in/out-Buchsenusw.)
VORSICHTSMASSNAHMEN BEI DER REPARATUR

1. Die mit dem ⚠ Symbol bezeichneten Teile sind ausschlaggebend für die Betriebssicherheit. Diese Teile nur gegen Original Ersatzteile austauschen.
2. Zusätzlich werden andere Teile entsprechend den Gesetzen zur Funkentstörung verwendet. Diese dürfen nur gegen die vorgeschriebenen Bauteile ausgetauscht werden.
   Beispiele: HF-Wandler, Tuner-Komponenten, Antennen-Wahlschalter, HF-Kabel, Entstörkondensatoren, Entstörfilter usw.
3. Nur die vorgeschriebene interne Verdrahtung verwenden. Hierbei besonders beachten:
   1) Mit PVC-Umhüllung versehene Leitungen.
   2) Doppelt isolierte Leitungen.
   3) Hochspannungsleitungen
4. Für gefährliche, stromführende Teile die vorgeschriebenen Isoliermaterialien verwenden. Hierbei besonders beachten:
   1) Isolierband
   2) PVC-Umhüllung
   3) Abstandshalter
   4) Isolierscheiben für Transistoren
   5) Plastikschrauben zum Anbringen von Mikroschaltern (speziell bei Plattenspielern)
5. Beim Austausch von Bauteilen auf der Primärseite (Transformatoren, Netzkabel, Entstör Kondensatoren usw.) Sind die Leitungsenden vor dem Löten fest zu umwickeln.



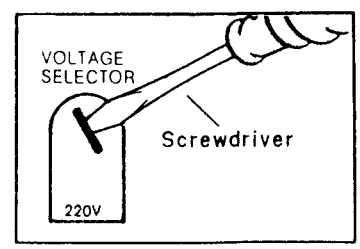
6. Es ist darauf zu achten, daß Leitungen nicht in Kontakt mit Wärme erzeugenden Teilen kommen (Kühlkörper, Oxidmetallschichtwiderstände, Sicherungswiderstände usw.
7. Überprüfen, dass die ausgetauschten Leitungen nicht in Kontakt mit scharfen Kanten oder spitzen Teilen kommen.
8. Desgl. sind die Bereiche in der Umgebung von Stellen, an denen repariert wurde, zu überprüfen.
9. Darauf achten, daß keine Fremdkörper (Schrauben, Lot, usw.) im Gerät verbleiben.

III. GERÄT VERBLEIBEN

3-1 WAHL DER SPANNUNG

Die Geräte für Kanada, USA, Europa, GB und Australien sind nicht mit dieser Funktion ausgestattet. Jedes Gerät ist ab Werk dem Bestimmungsland entsprechend eingestellt; einige Geräte können jedoch nach Bedarf auf 110V, 120V, 220V oder 240V eingestellt werden. Im Falle, daß die Spannung des Gerätes einstellbar ist:

1. Vor dem Auschluß des Netzkabels den an der Rückseite befindlichen.
2. Spannungswähler (VOLTAGE SELECTOR) mit einem Schraubenzieher drehen, so daß die korrekte Spannung angezeigt wird.



3-1-1 WECHSELSTROMFREQUENZ-UMSCHALTUNG

Eine Wechselstromfrequenz-Umschaltung ist nicht erforderlich, da für das GX-R66 Gleichstroimmotoren verwendet serden.

V. MECHANISCHE EINSTELLUNG

5-1 MESSEN DES ANDRUCKROLLENDRUCKS (siehe Abbildung 5-1)

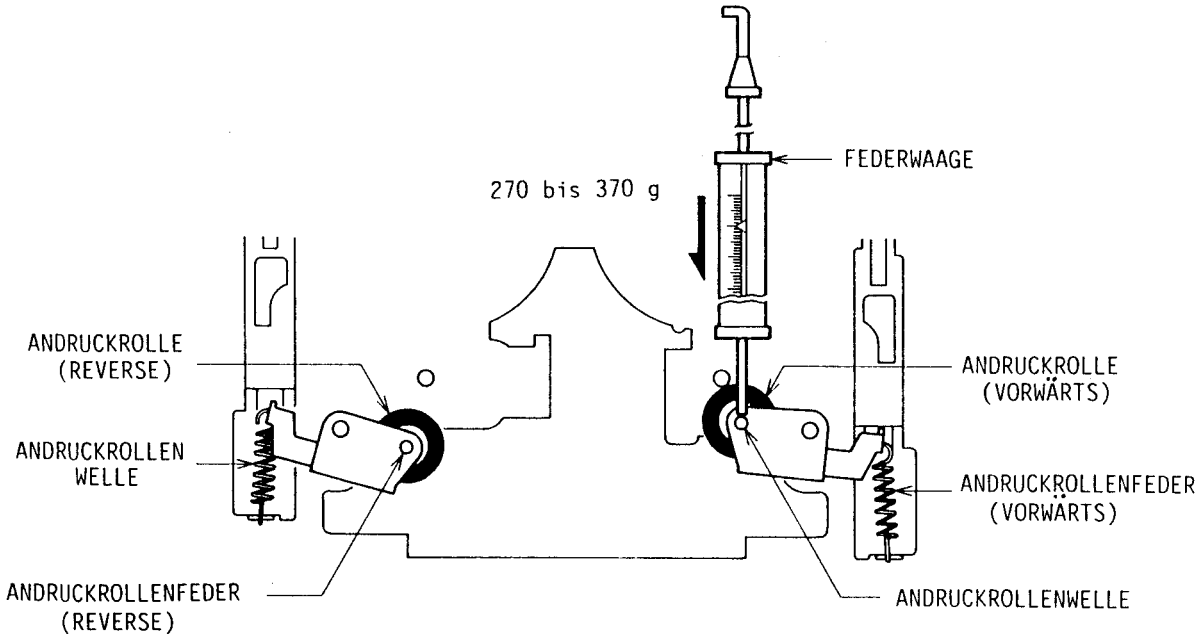


Abb. 5-1

Das Gerät auf FWD PLAY schalten. Die Andruckrollenwelle mit der Federwaage so herunterdrücken, daß ein Abstand von 1-2 mm Zwischen Andruckrolle und Capstan entsteht.
Anschließend den Druck vermindern, bis sich die Andruckrolle wieder zu drehen beginnt. In diesem Zustand den Wert ablesen. Der vorgeschriebene Andruck beträgt 270 bis 370 g.
Fall dieser Wert nicht erreicht wird, ist die Andruckrollenfeder auszutauschen.
Die gleiche Verfahrensweise für die Reverseseite anwenden.

5-2 WICKEL-DREHMOMENT-MESSUNGEN IN ALLEN BETRIEBSARTEN (siehe Abbildung 5-2)

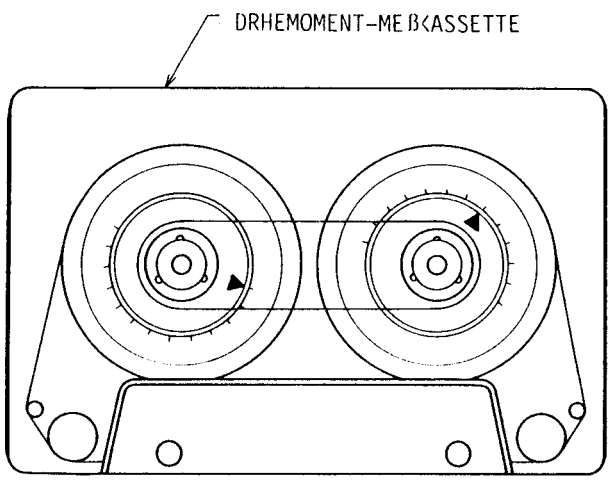


Abb. 5-2

Eine Drehmoment-Meßkassette (AJ-751179) einlegen und die Messung in allen Betriebsarten durchführen.
Für schnellen Vor- und Rücklauf führt man die Messung nach Stoppen des Bandlauf am Bandende durch.
Vorwärts- oder Reverse-Betriebsart
Aufwickelzug: 25 bis 45 g-cm
Abwickelzug: 2 bis 5 g-cm
Schnellvorlauf- oder Rückspul-Betriebsart
Aufwickel: 70 bis 150 g-cm

5-3 EINSTELLUNG DER BANDGESCHWINDIGKEIT (siehe Abbildung 5-3)

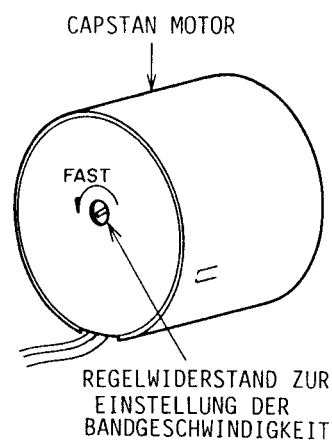


Abb. 5-3 Position des Regelwiderstandes zur Einstellung der Bandgeschwindigkeit

Einen Frequenzzähler an den Line-Ausgang anschließen. Eine mit einem 1000Hz-Signal bespielte Testcassette (AT7750744) oder eine mit 3150Hz bespielte Testcasette (AT-751263) wiedergeben und den Regelwiderstand zur Einstellung der Bandgeschwindigkeit so einstellen (siehe Abb. 5-3), daß eine Frequenz von 1000 ± 3 Hz bzw. 3150 ± 10Hz erzielt wird.

VI. ZUR TONKOPFEINSTELLUNG

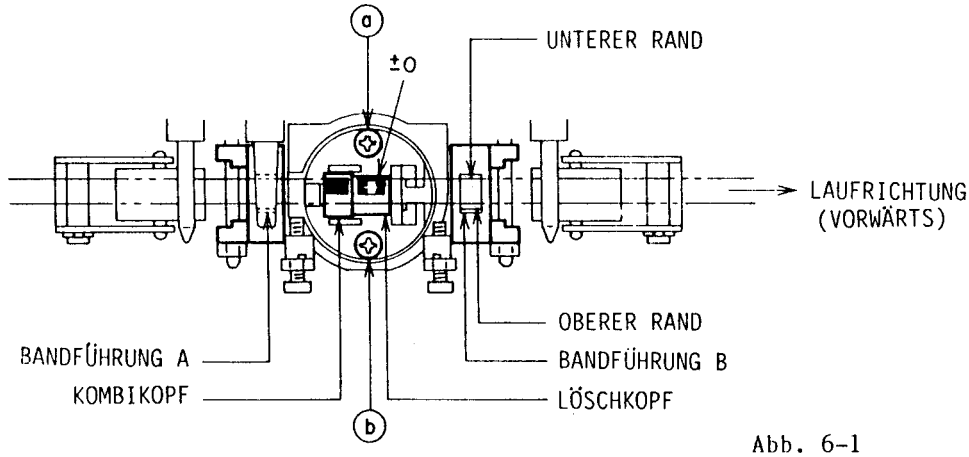


Abb. 6-1

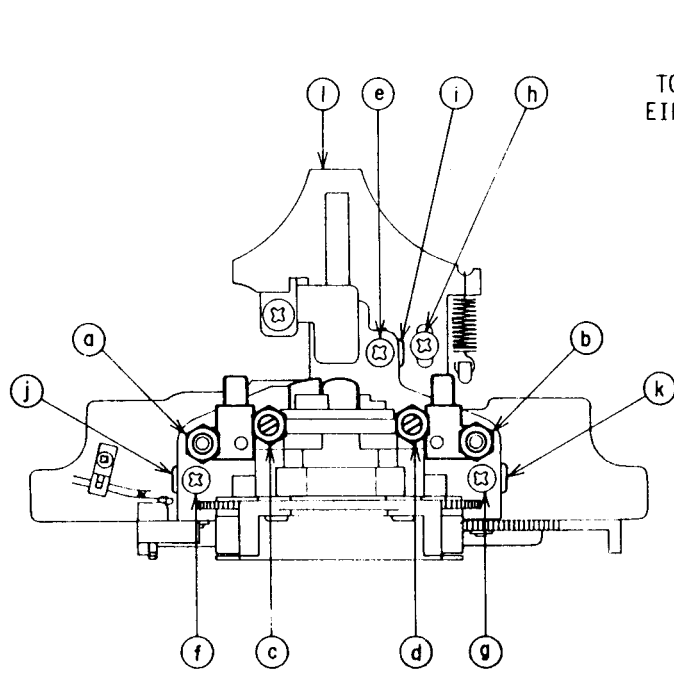


Abb. 6-2

Abb. 6-3 Tonkopfvorsprung-Messgerät (TF-111CJ)

Abb. 6-4 Spiegelcassette (MC-112C)

6-1 BANDFÜHRUNGS-EINSTELLUNG (Siehe Abbildung 6-1 und 6-4)

1) Wie in Abbildung 6-3 gezeigt, eine Spiegelkassette (AT-751178) verwenden, um den Tonkopfbereich besser einsehen zu können und das Gerät auf Wiedergabe schalten.

2) Die Bandführungen Ⓐ + Ⓑ sind mit Hilfe der beiden Einstellmuttern ⓐ + ⓑ, wie in Abb. 6-2 gezeigt, so einzustellen, daß das Band glatt über den unteren Rand beider Bandführungen läuft und keinerlei Verformungen aufweist.

6-2 KOMBIKOPF-AZIMUTH-EINSTELLUNG

Eine 10kHz-Tonkopf-Azimuth-Einstellkassette (AT-750778) wiedergeben und die Schrauben Ⓒ (FWD-Riechtung) und ⓓ (REV-Richtung) so einstellen, daß die Pegel beider Kanäle Maximum sind. (HINWEIS: Die schrauben nicht zu weit drehen, da andere (falsche) Maximalwerte weiter entfernt auf beiden Seiten der korrekten Positionen auftreten.

6-3 EINSTELLUNG DER TONKOPFHÖHE

Diese Einstellung ist nicht erforderlich, da das GX-R66 mit einem rotierenden Kopfsystem (mit Löschkopf REC/PB-Kombikopf) ausgestattet ist. Eine Überprüfung auf korrekte Kopfhöhe ist jedoch erforderlich und wird wie folgt ausgeführt.

1) Zunächst wie im Abschnitt 6-2 beschrieben, den Azimuth überprüfen.
2) Eine 315Hz (oder 333Hz) Wiedergabepegel-Abgleichcassette (AT-750773) in der FWD Wiedergabe-Betriebsart abspielen und den Wiedergabepegel-Einstellwiderstand (VR5 auf der Vorverstärker-Leiterplatte) so einstellen, daß der LINE OUT Pegel des linken Kanals -5,5dBm beträgt. Danach den pegel des gleichen Kanals in der REV-Betriebsart überprüfen. Die Pegeldifferenz zwischen den Betriebsarten FWD und REV sollte innerhalb ± 1dBm liegen (-4,5dBm bis -6,5dBm).
3) Wenn im obigen Abschnitt 2 die Differenz mehr als ± 1dBm beträgt, nimmt man die Einstellung der Bandführungen A und B durch Drehen der Bandführungshöhen- Einstellschrauben ⓐ und ⓑ vor, die man in der gleichen Richtung um jeweils 1/4 Umdrehungen (±0,1 mm) dreht, so daß die Differenz innerhalb ±1dBm liegt.
4) Wenn die Differenz durch die obige Einstellung sich nicht korrigieren läßt, ist eine Einstellung der Kopfhöhe erforderlich. Diese Kann durch Veränderung der kopfhöhen-Einstellscheiben ⓘ, ⓙ und ⓚ vorgenommen werden. (Die Dicke dieser Scheiben ist ⓘ = 0,45 mm, ⓙ und ⓚ = 0,3 mm). Für den Scheibenaustausch die Schrauben ⓔ, ⓕ und ⓖ lösen.
Wenn der Pegel in der REV-Betriebsart niedriger ist, bedeutet dies, daß der Kopf zu hoch ist, daher sind in diesem Falle die Unterlegscheiben gegen dünnere auszutauschen. Wenn der Pegel in de REV-Betriebsart höher ist, nimmt ma den Austausch gegen dickere vor.
Nach dem Austausch der Unterlegscheiben nimmt man die gleiche Einstellung wie im Abschnitt 1 vor und stellt sicher, daß der LINE OUT Pegel -5,5dBm ± 1dBm beträgt.
Zur wietern Kontrolle ist ein 4-Spur-Kopfhöhen-Einstellband (1kHz/4-Spur AT-750775) abzuspielen. Der Line Ausgangspegel beider Kanäle sollte mehr als -8dBm betragen und die Differenz im Pegel zwischen den Betriebsarten FWD und REV sollte innerhalb ±1dBm liegen. Anderenfalls ist ein Feinabgleich in der gleichen Weise wie in den Abschnitten 3 und 4 auszuführen.
5) Ein evtl. erforderlicher Kopfaustausch wird leicht gemacht, indem man nur die Schrauben ⓐ und ⓑ in Abbildung 6-1 löst.

6-4 KOPFBLOCKVORSPRUNG-EINSTELLUNG (siehe Abb. 6-2 und 6-3)

Eine Tonkopfvorsprung-Messcassette (AT-751180) verwenden und die Betribsart FWD oder REV Wiedergabe wählen.
Die Schraube ⓗ lösen und das Kopfträger-Chassis so einstellen, daß das Meßgerät 3,4 ± 0,15 mm anzeigt.
Nach der Einstellung die Schraube ⓗ mit Siegellack sichern.

VII. ELEKTRISCHER ABGLEICH

7-1 ABGLEICH DER QUICK-REVERSE-EMPFINDLICHKEIT

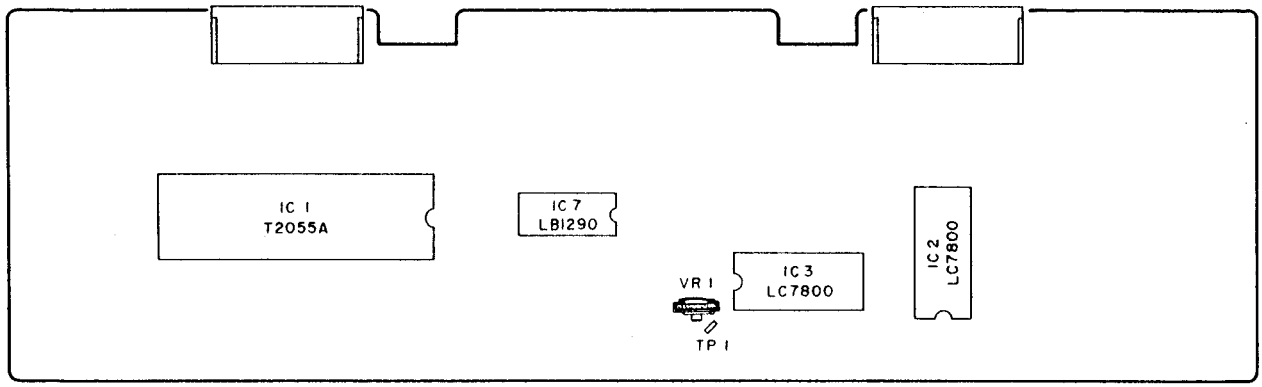


Abb. 7-1 GX-R66 Abgleich reverse-Empfindlichkeit

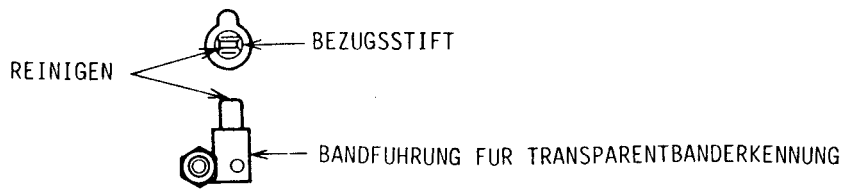


Abb. 7-2

1) Durch Entanahme des Bandes aus einer weißen Testcassette eine bandlose Cassette herstellen.
2) EinDigitalvoltmeter zwischen TP-1 und Masse anschließen.
3) Unter Verwendung der bandlosen Cassette den Regelwiderstan VR1 so abgleichen, daß das Digitalvoltmeter in der FWD Widergabe 14V $\pm$ 0,5V Gleichspannung anzeigt.
4) Werden die erwähnten 14V nicht erreicht, ist der Widerstand R18 (150k ohm) auf der Systemsteuer-Leiterplatte auszubauen und der Regelwiderstand VR1 nochmals in der gleichen Weise wie im Abschnitt abzugleichen.

HINWEIS: Vor diesem Abgleich den Bezugsstift und die Bandführung für Transparentbanderkennung reinigen (siehe Abb. 7-2)

7-2 ABGLEICH DER VORVERSTÄRKER-LEITERPLATTE

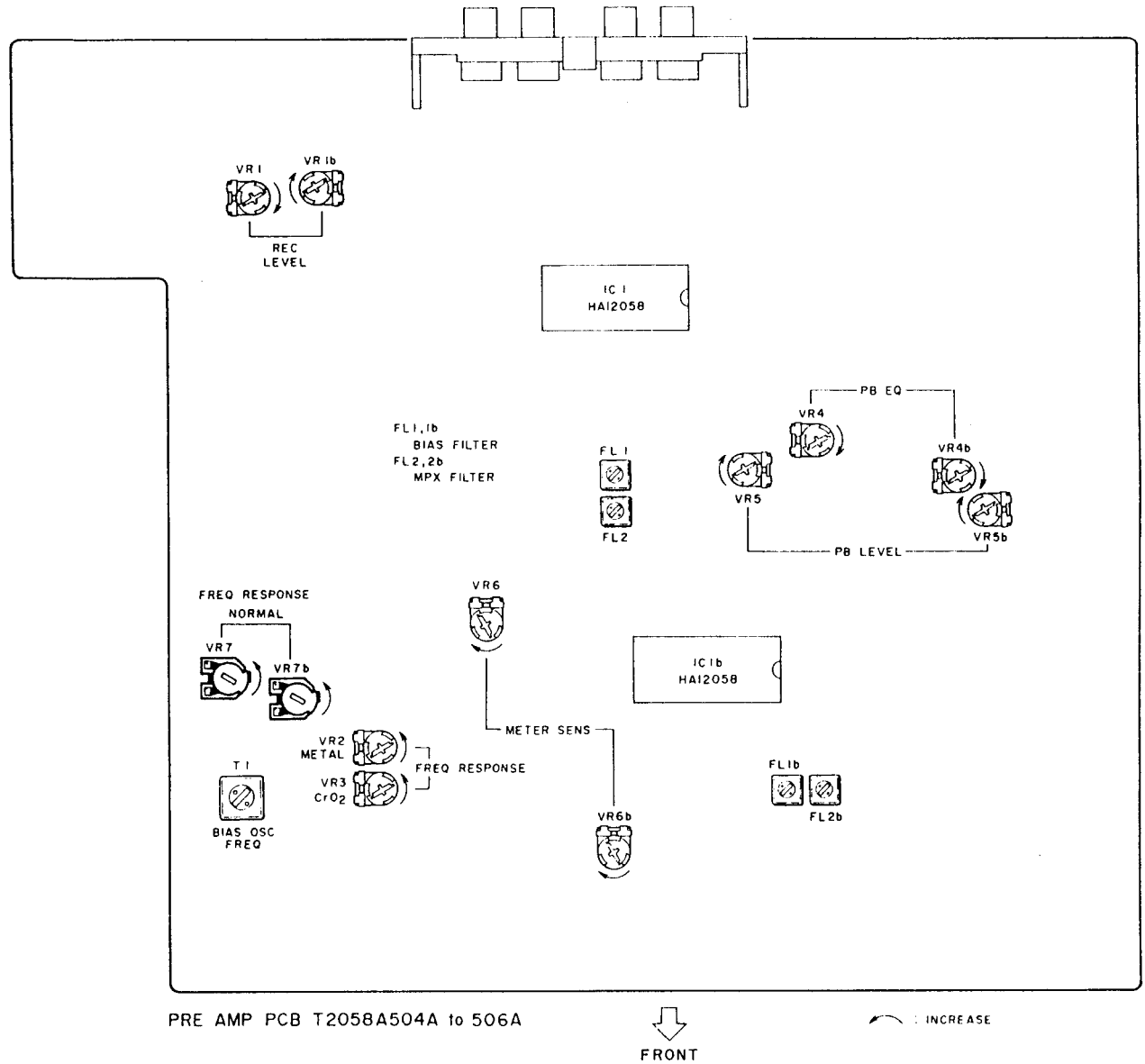


Abb. 7-3 GX-R66 Abgleichpunkte an der Vorverstärker-Leiterplatte

Schritt	Abgleichgegenstand	Testcassette und angelegtes signal	Betriebsart	Abgleichteil	Ergebnis	Bemerkungen
1	FWD PB Pegel	333Hz (AT-750773) oder 315Hz (AT-750773)	FWD PB	VR5	-6,1 ± 0,2dBm oder -5,5 ± 0,2dBm	
2	REV PB Pegel	333Hz (AT-750773) oder 315Hz (AT-750773)	REV PB		-6,1 ± 0,2dBm oder -5,5 ± 0,2dBm	Prüfung
3	FWD PB EQ	10kHz-15dB (AT-750778)	FWD PB	VR4	-20,5 ± 0,5dBm	
4	REV PB EQ	10kHz-15dB (AT-750778)	REV PB		-20,5 ± 0,5dBm	Prüfung
5	BIAS OSC FREQ	Kein Signaleingang	REC	T1	100kHz ± 0,5kHz	
6	Frequenzgang Normalposition	Normal-Leercassette 1kHz,10kHz -25,5dBm	REC/PB	VR7	1kHz, 10kHz Linear ± 0,3dB	
7	Frequenzgang CrO_2-Position	CrO_2-Leercassette 1kHz,10kHz-25,5dBm	REC/PB	VR3	1kHz, 10kHz Linear ± 0,8dB	
8	Frequenzgang Reineisenband-Position	Reineisenband-Leercassette 1kHz, 10kHz -25,5dBm	REC/PB	VR2	1kHz, 10kHz Linear ± 0.8dBm	
9	REC Pegel	Normalband-Leercassette 1kHz, -5,5dBm	REC/PB	VR1	-5,5 ± 0,5dBm	
10	Vormagnetisierungsfilter	Kein Signaleingang	REC	FL1	Minimumausgang	Aussteuerungsregler auf Maximum stellen
11	Anzeige empfindlichkeit	1kHz Eingang	REC PAUSE	VR6	Ovu Anzeige bei Line Ausgang -5,9 ± 0,2dBm	Zu diesem Zeitpunkt den Line Ausgangspegel um 0,1dB senken und Prüfen, daß die Ovu Anzeige erlischt.
12	MPX-Filter	19kHz vom Oszillator	REC	FL2	Minimumausgang	MPX-Filterschalter "ON"

HINWEIS:
1. Alle obigen Einstellungen außer für Schritt 5, 10 und 12 gelten für die FWD-Betriebsart; diese Einstellungen sind im REV-Betrieb nicht erforderlich, ader die Prüfung jedes Schritts in der REV-Betriebsart sollte ausgeführt werden.
2. Obiger Abgleich, außer für Schritt 12, nur mit ausgeschalteter Dolby-Rauschunterdruckung ausführen.
3. Zum Adgleich nur folgende Bänder verwenden:
   Normalband: Maxell UD C-60
   CrO_2 Band: TDK SA C-60
   Reineisenband: TDK MA C-60
4. Für weitere Einstellungen siehe Abbildung 7-3.

7-3 ABGLEICH DER RAUSCHUNTERDRÜCKUNGS-LEITERPLATTE (dbx)

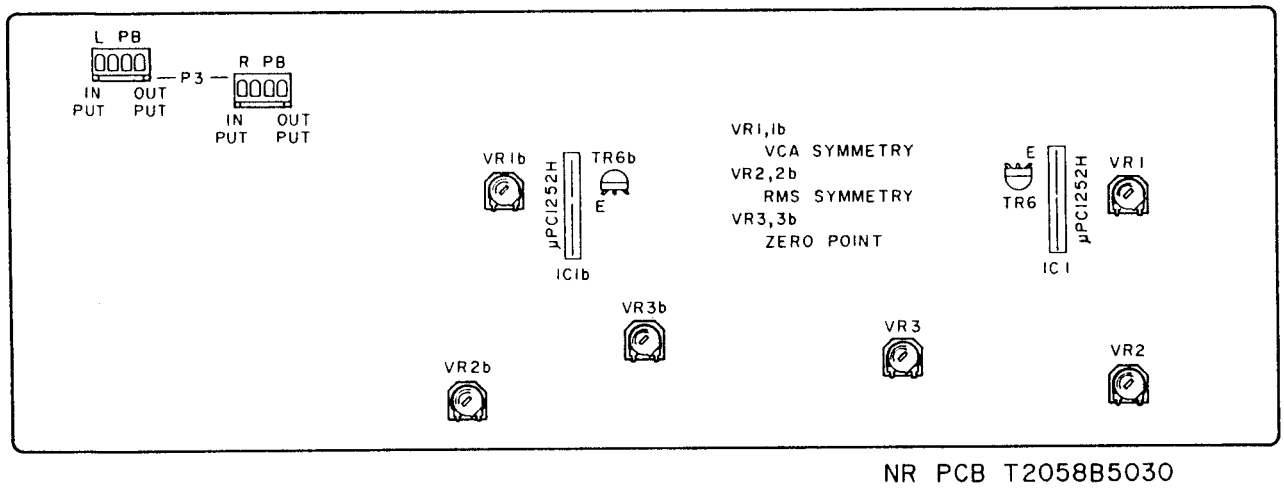


Abb. 7-4 Abgleichpunkte auf der Rauschunterdrückungs-Leiterplatte

HINWEIS: Der Abgleich der dbx-Rauschunterdrückung ist nicht erforderlich, außer wenn Teile ausgewechselt oder ein Regelwiderstand versehentlich verstellt wird.

Schritt	Abgleichgegenstand	Eingangsignal	Testpunkt	Abgleichpunkt	Ergebnis	Bemerkungen
1	R.M.S Symmetrie	100kHz -5,5dBm (410mV) vom einem	TR6 Emitter	VR2	Oszilloskop an TR6 (Ermitter) anschließen und VR2 so einstellen, daß der Spitzenwert der Wellenform bei 200Hz konstant wird.	Siehe Zeichnung 7-5 und 7-6
2	V.C.A Symmetrie	1kHz -5,5dBm (410mV) vom Oszillator	P3 (R, L-ch) OUTPUT	VR1	VR1 so abgleichen, daß die Verzerrung an der Klemme P3 minimal wird.	
3	Null-Punkt	1kHz -5,5dBm (410mV) vom Oszillator	P3 (R, L-ch) OUTPUT	VR3	VR3 so abgleichen, daß der Ausgangspegel der P3-Ausgangsklemme dem Eingang bei -5,5dBm (410mV) entspricht.	
4	Überprüfung des DECODER-Betriebs	1kHz -5,5dBm ± 10dB vom Oszillator	P3 (R, L-ch) OUTPUT	Prüfung	Wenn der Eingangssignalpegel um ±10dB von Ovu (-5,5dBm) verändert wird, überprüfen, ob der DECODER-Ausgangspegel (P3) sich entsprechend der Tabelle verhalt.	Siehe Tabelle 7-1

HINWEIS: Die Einstellung sollte bei eingeschaltetem dbx NR System in Wiedergabebetriebsart durchgeführt werden.

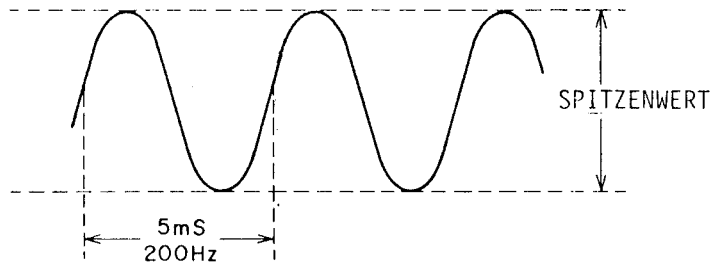
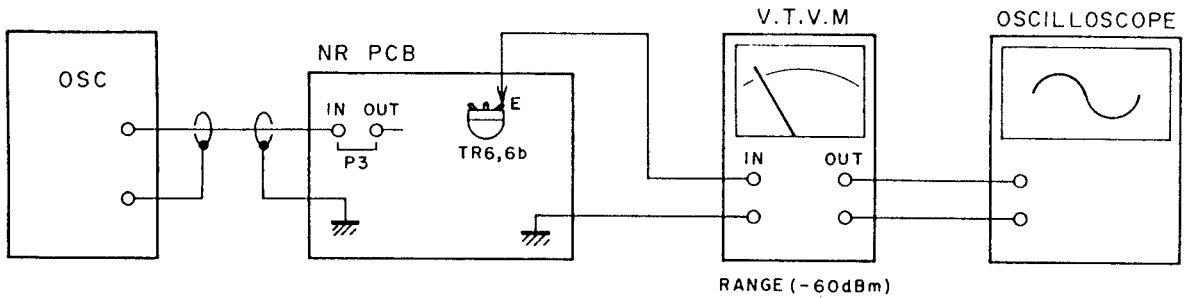


Abb. 7-5 Oszilloskop-Wellenform



Das Oszilloskop sollte über ein Röhrenvoltmeter angeschlossen werden, da der Signalpegel von TR6,6b (Emitter) extrem niedrig ist.

Abb. 7-6 RMS-Symmetrie-Abgleich

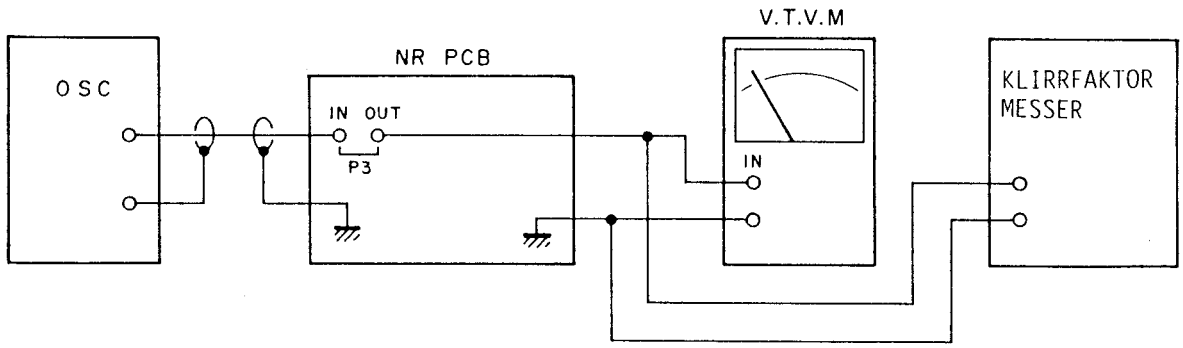


Abb. 7-7 VCA-Symmetrie und Null-Punktabgleich

Eingangspegel	Ausgangspegel (DECODER)
−15.5 dBm	−25.5 dBm
− 5.5 dBm	− 5.5 dBm
+ 4.5 dBm	+14.5 dBm

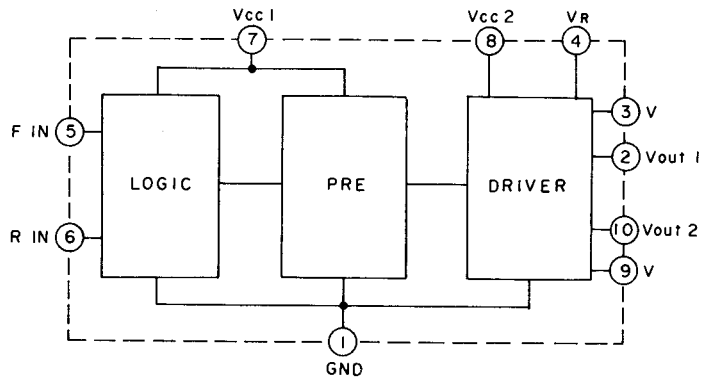
Tabelle 7-1

AKAI

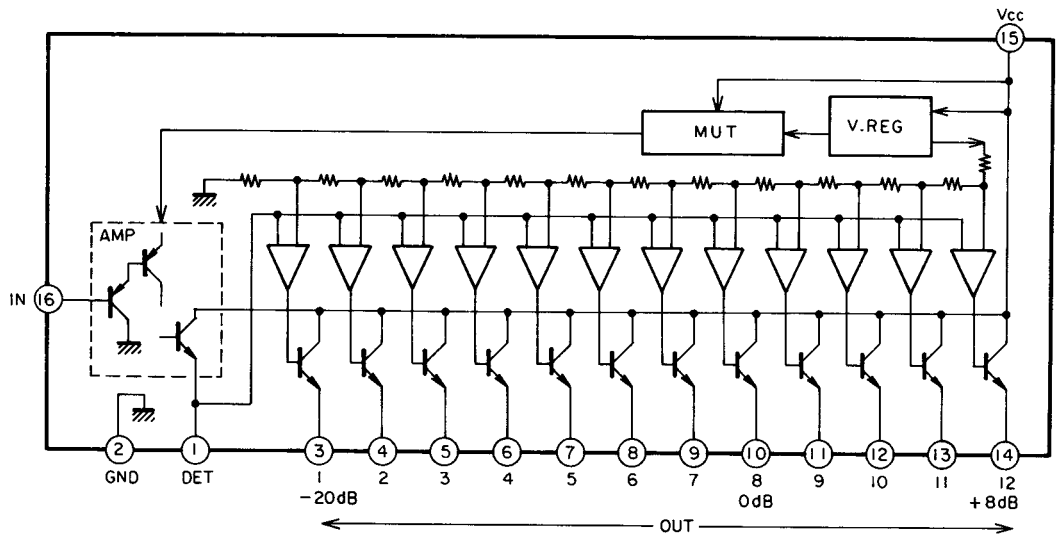
MODEL GX-R66

P.C BOARDS
SCHEMATIC DIAGRAM

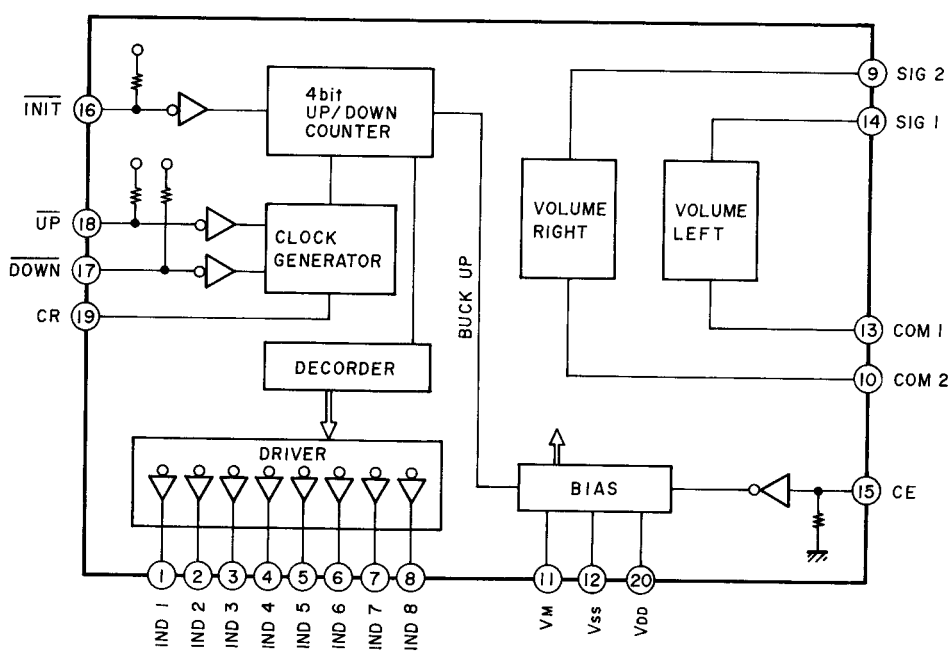
BA6109



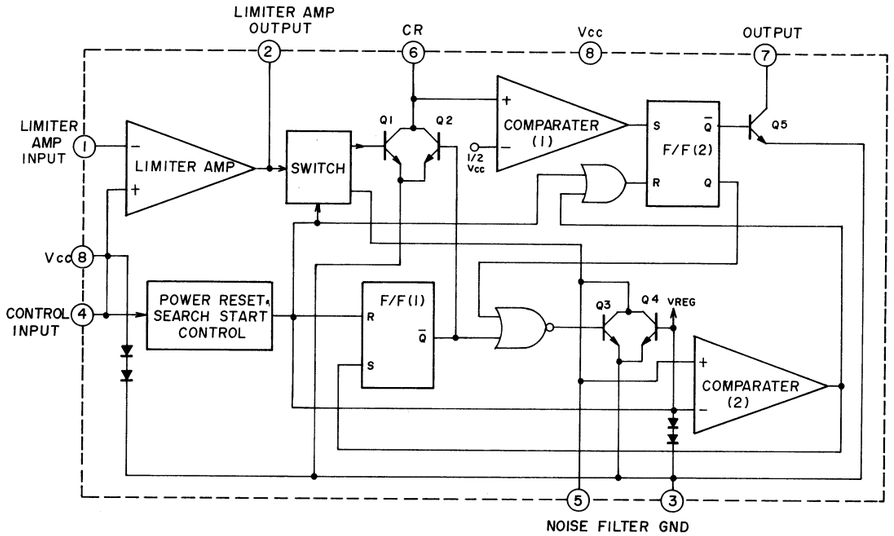
BA6146



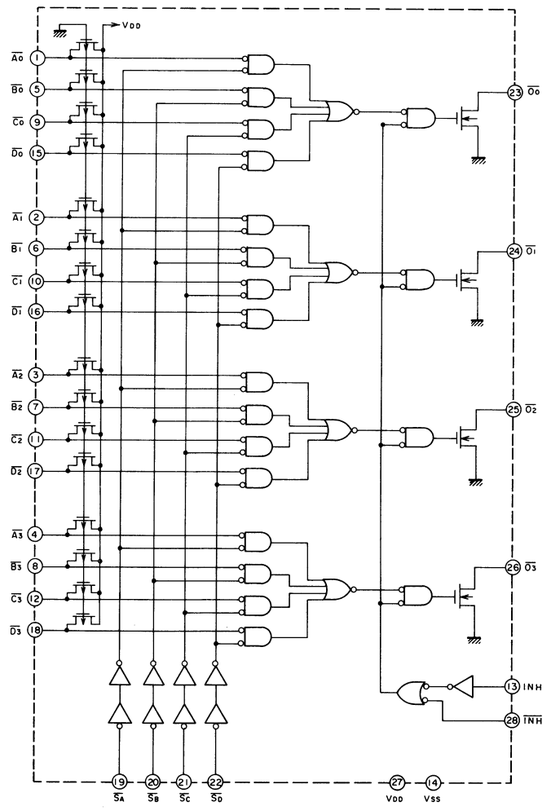
LC7530



M51143L



LC7800



T2055A

Pin No.	Symbol	Description
1	R40	REC MUTE } Output, activated at "H"
2	R41	P.B MUTE } Output, activated at "H"
3	R42	REC/PB Control, "H" PB, "L" REC
4	R43	OSC Control output, activates at "L"
5	R50	Forward } Cam Motor Control Output
6	R51	Reverse } Cam Motor Control Output
7	R52	IPLS FLD Drive output, Lights at "L"
8	R53	COMMON BUS Output Not used
9	R60	} Electronic Counter Digit Drive Output
10	R61	} Electronic Counter Digit Drive Output
11	R62	} Electronic Counter Digit Drive Output
12	R64	} Electronic Counter Digit Drive Output
13	R70	} STROBE for input port select } "H" at inhibit
14	R71	} STROBE for input port select } "H" at inhibit
15	R72	INHIBIT } "H" at inhibit
16	R73	FLD Drive output, Lights at "L"
17	P10	FWD } FLD Drive output, Light at "H"
18	P11	REV } FLD Drive output, Light at "H"
19	P12	REC } FLD Drive output, Light at "H"
20	P13	R. PLAY
21	V_{SS}	GND
22	P20	ONCE REV } FLD Drive output, Light at "H"
23	P21	CONTI. REV } FLD Drive output, Light at "H"
24	P22	INTRO } FLD Drive output, Light at "H"
25	P23	BSP
26	K00	} DATA input
27	K01	} DATA input
28	K02	} DATA input
29	K03	} DATA input
30	TEST	GND
31	XTAL	Ceramic OSC input
32	EXTAL	Ceramic OSC output
33	RESET	Reset
34	V_{HH}	+5V
35	R80	Counter Pulse
36	R81	CAM Motor Pulse
37	R82	COMMON BUS input Not used
38	R83	CAM MOTOR direction detector input
39	R90	IPLS Signal detector input "H" at No signal parts
40	R91	TEST ENABLE
41	R92	CAM MODE Stop Detector input "L" at stop mode
42	V_{DD}	+5V

R50	0	1	1
R51	1	0	1
	RWD	REV	STOP

GX-R66

注意 △の付された部品は、安全上重要部品です。交換の際は、指定部品以外は使用しないこと

WARNING: △ INDICATES SAFETY CRITICAL COMPONENTS.
FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: △ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT

C, A, E, S
C, A AC120V 60Hz
E AC220V 50Hz
B, S AC240V 50Hz
B

POWER
T901 T2059(A,C)
C, A 120V
E 220V
B, S 240V
0.047/250AC(M)

T901 T2059(A,C)
T2059(E)
T2059(B,S)
AC110V to 240V 50/60Hz
U
POWER
VOLTAGE SELECTOR
0.047/250AC(M)
VS90V
120V
220V
240V

2SA1392 2SC2274 2SC3383
2SB744 2SD794
2SA1345 2SA1348 2SC3400
2SA1115 2SC2603

リモート基板
REMOTE PCB
T2058A501E
REMOTE

メーター基板
METER PCB T2058A502B

IC5 LB1294
IC6 LB1294
TR2 2SA1348
TR1 2SC3400
FWD
REV
FF
REW
STOP
REC
AUTO MUTE
REC CANCEL
RESET
IPLS
BSP
PRGM NO
MUSIC NO
BSPS
IPLS
REPEAT
INTRO
R.PLAY
REC
IN 1

IC3 BA6146 (Lch)
IC4 BA6146 (Rch)
MUTE
V REG.
DOLBY ON/OFF
SW32
SW33
SW34
MPX
DOLBY NR
FILTER
dbx
REC LEVEL
MAX
IN 2

IC2 LC7800
IC3 LC7800
SW20 SW21 SW22 SW23 SW24 SW25 SW26 SW27 SW28 SW29 SW30 SW31
START/PAUSE
INTRO
CORRECT
REPEAT
SW13 REV SELECT
SW14 REC LEVEL (-)
SW15 REC LEVEL (+)
TIMER PLAY
REC
IC1 LB1290
IC5 LC7530
TR11 2SC2603(E,F)
TR12 2SC2603(E,F)
TR5,7,8 2SC2603(E,F)
TR6, 2SA1115(E,F)
TO PREAMP PCB P1
TO PREAMP PCB P2

IC1 T2055A
X1 CSA4.00MG
RESET
COUNTER PULSE
CAM MOTOR PULSE
CAM MOTOR DERECTION
IPLS SIGNAL
TEST ENABLE
CAM MODE STOP
REC MUTE
PB MUTE
REC/PB PB+H REC-L
IPLS IND
TO PREAMP PCB P2

IC4 LC40498
IC4 LC4049B
IC6 BA6109
TR9 2SD615K (D,E,F)
TR10 2SC2878K (E,F)
TR11 2SC2603(E,F)
TR1 2SC3400
TR2 2SA1348
TR3 2SA1345

シスコン基板
SYSCON PCB T2058A502A
TO PREAMP PCB P2
+5V
+13V
GND
-13.6V

CONTROL PCB CMR01C1890
EJECT
SW902
リーフ スイッチ基板
LEAF SWITCH PCB CMR01C1490 1/2
METAL
CrO2
SW907
SW904
リール ローテーション基板
REEL ROTATION PCB CMR01D1440
PH1 SPI-201
カムモーター パルス基板
CAM MOTOR PULSE PCB CMR01C1890
PH2 GP-1504
カムモーター ディレクション基板
CAM MOTOR DIRECTION PCB CMR01C1890
PH3 GP-1504
ディテクター(A)基板
DETECTOR(A) PCB CMR01D1290
TR902 PT3501(T)
ディテクター(B)基板
DETECTOR(B) PCB CMR01D1620
D905 GL-350
CAM SPIN DERECTION
SW905
FWD / REV
SW901
ANTI REC FWD
SW906
ANTI REC REV
リーフ スイッチ基板
LEAF SWITCH PCB CMR01C1490 1/2
TR901 PT3501(T)
D901 GL-350
ガイド ディテクター基板
GUIDE DETECTOR PCB CMR01D0220
IN 1
ハウジング基板
HOUSING PCB CMR01D1430
M902 EG-5101ED-282
CAPSTAN MOTOR
M901 RG-1805
CAM MOTOR

電源基板
POWER SUPPLY PCB
T2058A504D J,U T2058A505D C,A T2058A506D E,B,S
AC100V 50/60Hz
POWER
TR1 2SC2603(E,F)
TR2 2SA1115(E,F)
TR4 2SD612K(E,F)
TR3 2SC2878K (E,F)
TR7 2SA1392 (S,T)
TR8 2SC3383 (S,T)
TR5 2SB744 (P,Q,R)
TR9 2SB744 (P,Q,R)
+15V
+5V
GND
-15V
+28V
+8.5V
-5V
AC3.7V
TO NR PCB T301
TO PREAMP PCB T108

	F1, F2	F3	F4	F5
J, U	0.5A 250V	0.31A 250V	0.63A 250V	0.5A 250V
C, A	0.5A 125V	0.31A 125V	0.63A 125V	0.5A 125V
E, B, S	T0.4A	T0.25A	T0.5A	T0.4A

B電源 B(POWER SUPPLY) LINE
録音信号系 REC SIGNAL LINE

※ SIGNAL LINES ARE INDICATED LEFT CHANNEL ONLY
VOLTAGES INDICATED AT PB MODE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)

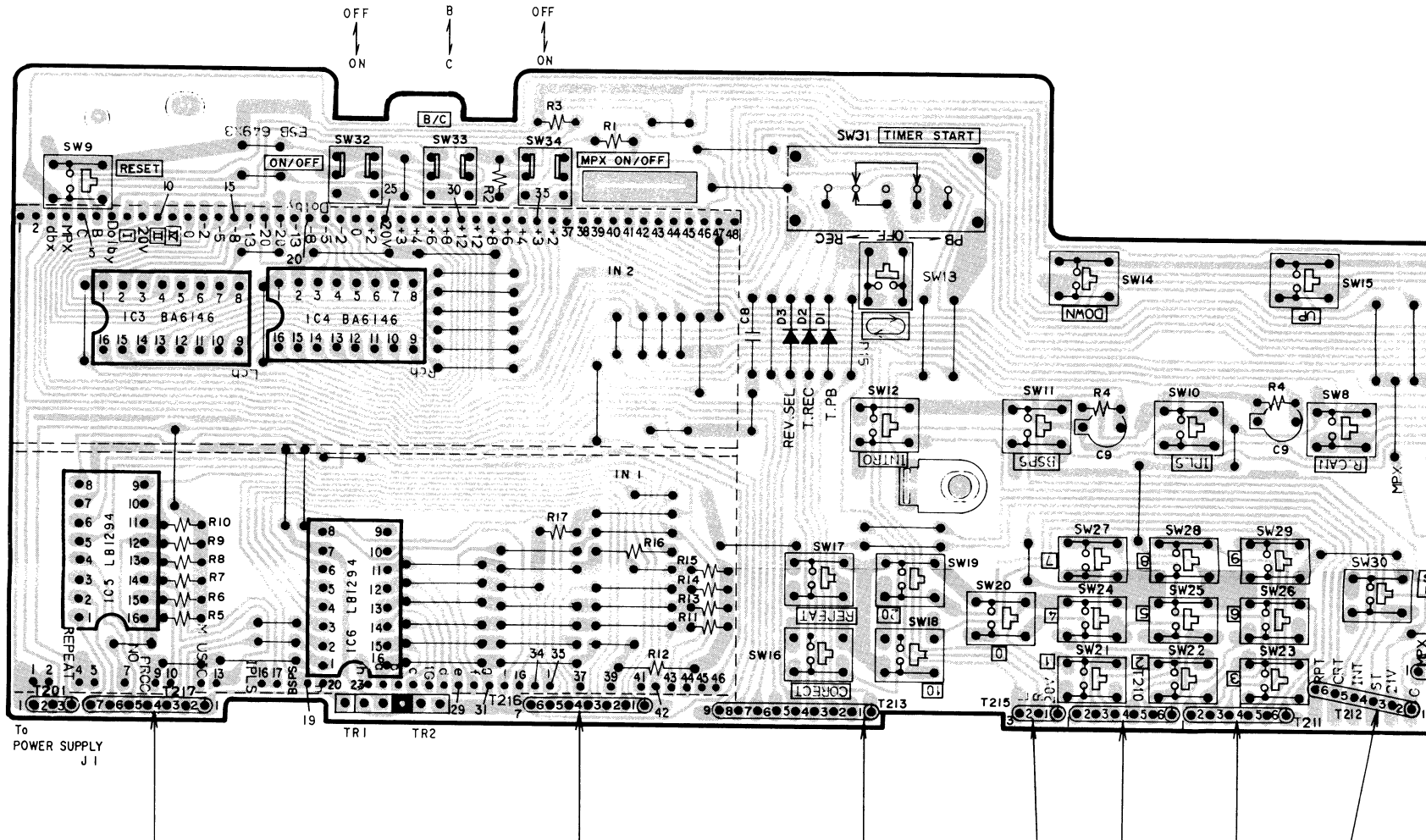
備考
Cの単位(特に指定された部品以外)
抵抗……Ω 1/6W(J)
コンデンサ……μF 50WV(J)

001495

GX-R66
POWER & SYSCON SCHEMATIC DIAGRAM
NO.3-1 840329B 4C

メーター基板
METER PCB
T2058A502B

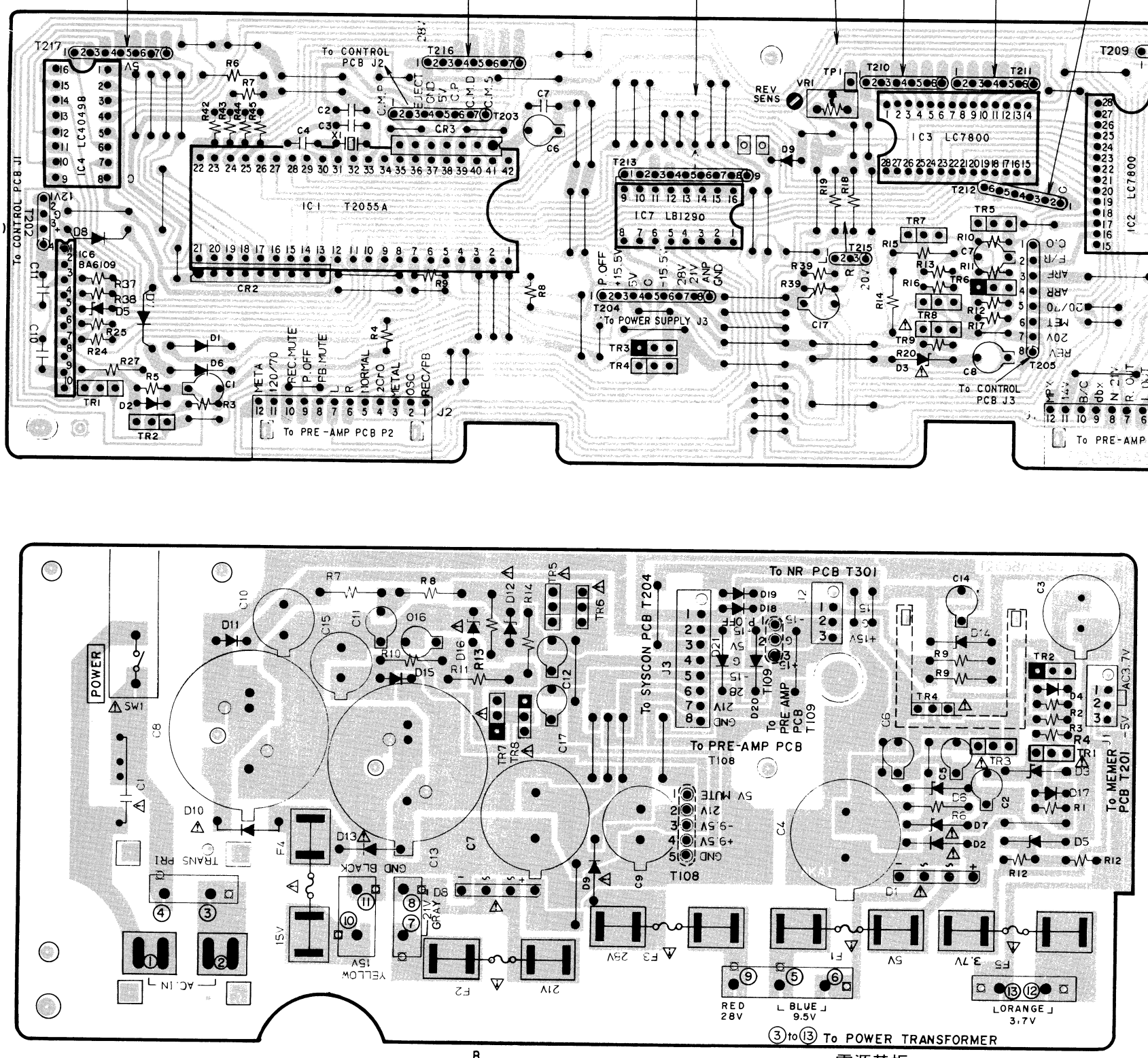
TR1----2SC3400
TR2----2SA1348

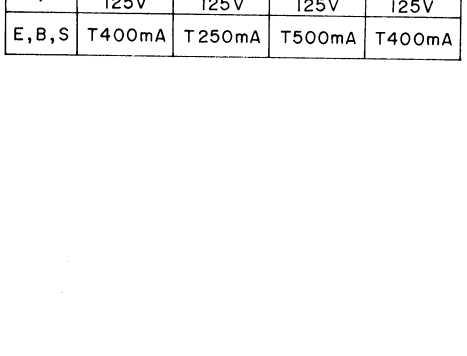


システム コントロール基板
SYSTEM CONTOROL PCB
T2058A502A

TR1,2,4------2SC3400
TR3---------2SA1345
TR5,7,8,11,12----2SC2603(E,F)
TR6---------2SA1115(E,F)
TR9---------2SD612K(D,E,F)

B
=PNP TRANSISTOR
B
=NPN TRANSISTOR





※	F1,F2	F3	F4	F5
J,U	500mA 250V	310mA 250V	630mA 250V	500mA 250V
C,A	500mA 125V	310mA 125V	630mA 125V	500mA 125V
E,B,S	T400mA	T250mA	T500mA	T400mA

TR1----2SC2603(E,F)
TR2----2SA1115(E,F)
TR3----2SC2274K(E,F)
TR4----2SD612K(E,F)
TR5----2SC3383(S,T)
TR6----2SD794(P,Q,R)
TR7----2SA1392(S,T)
TR8----2SB744(P,Q,R)

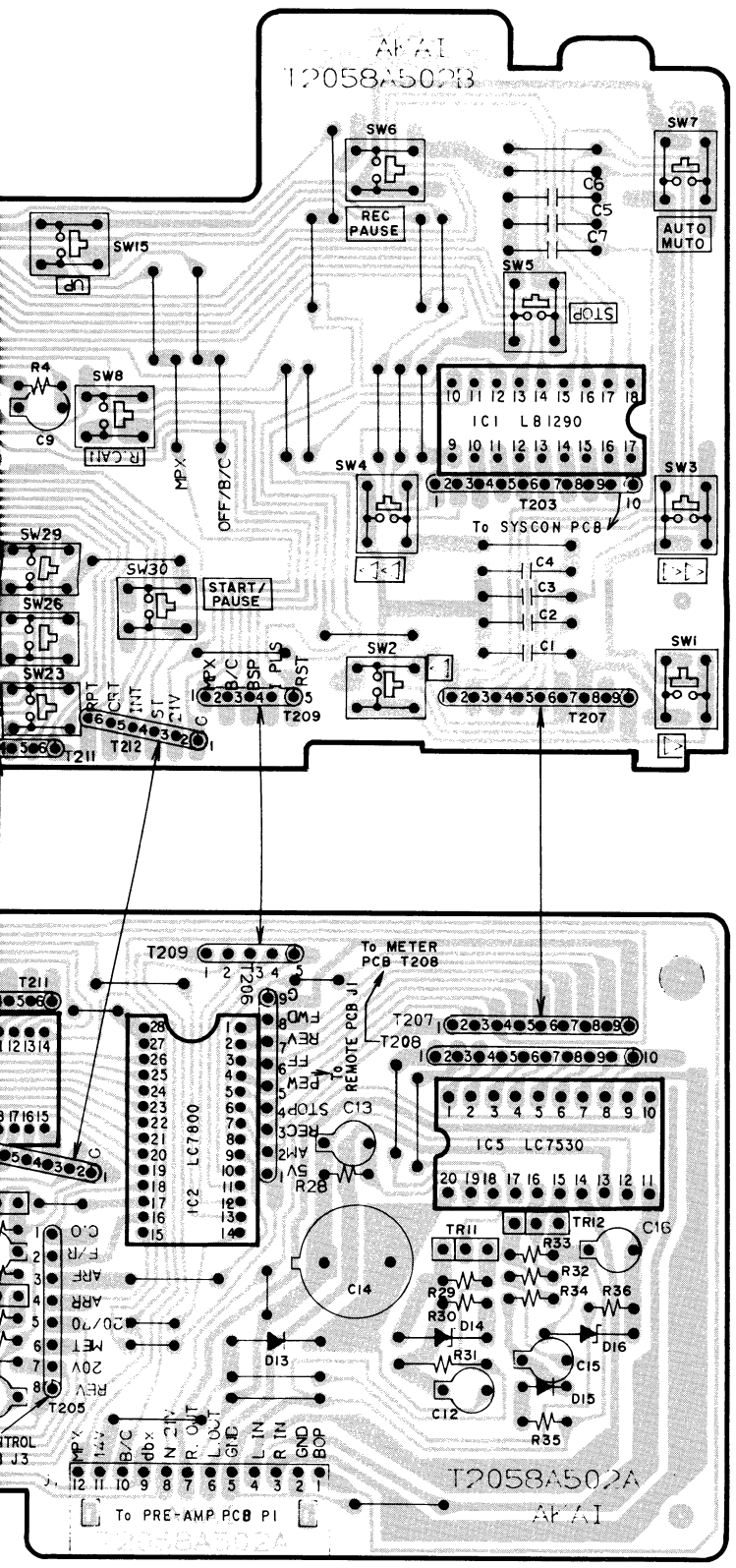
B
=PNP TRANSISTOR
B
=NPN TRANSISTOR

電源基板
POWER SUPPLY PCB
T2058A504D J,U
505D C,A
506D E,B,S

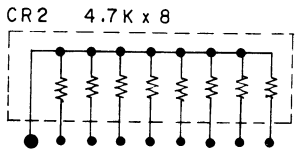
注意：⚠の付された部品は、安全上重要部品です 交換の際は、指定部品以外は使用しないこと。

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS.
FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

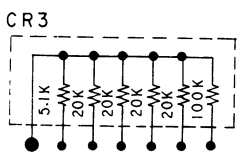
AVERTISSEMENT: ⚠ IL INDIQU LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

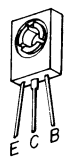


CR2 4.7K x 8



CR3

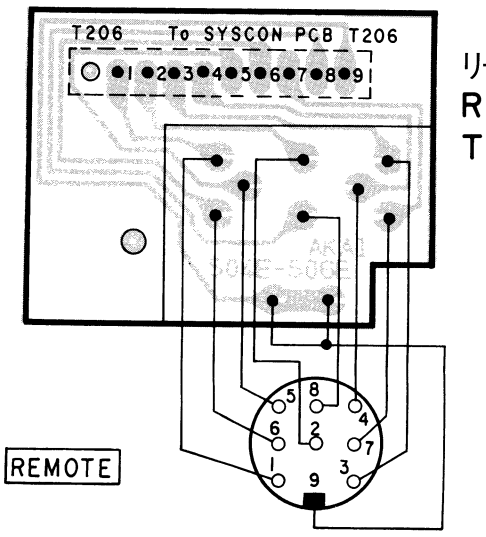




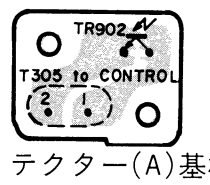
2SD612K

2SA1345
2SA1348
2SC3400

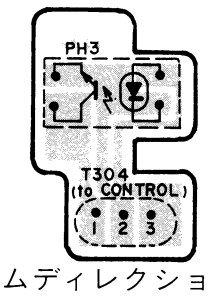
2SA1115
2SC2603



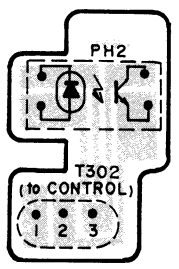
リモート基板
REMOTE PCB
T2058A504E J,U
505E C,A
506E E,B,S



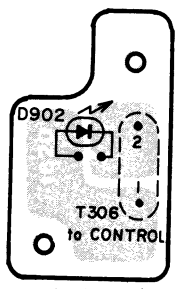
ディテクター(A)基板
DETECTOR(A) PCB
CMR01D1290



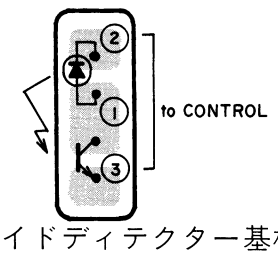
カムディレクション
基板
COM DIRECTION
PCB
CMR01C189B



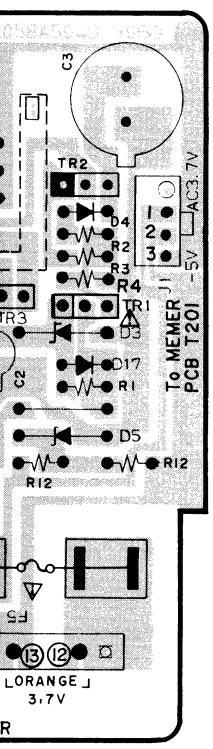
カムモーター
パルス基板
CAM MOTOR
PULSE PCB
CMR01C189C



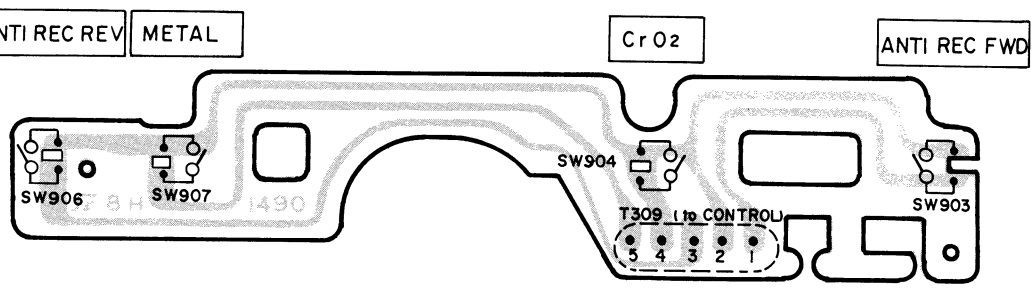
ディテクター(B)基板
DETECTOR(B) PCB
CMR01D1620



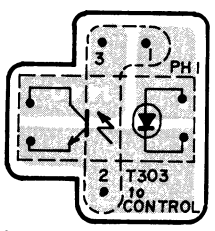
ガイドディテクター基板
GUIDE DETECTOR
PCB CMR01D0220



PCB
,U
,A
,B,S

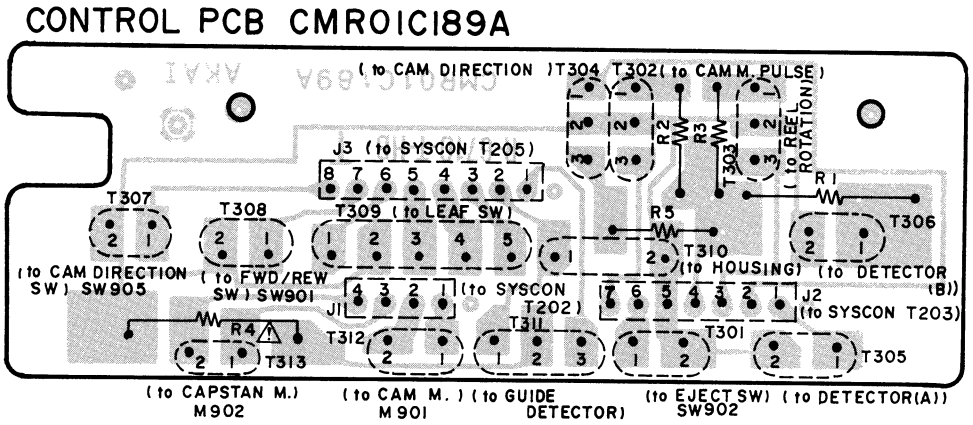


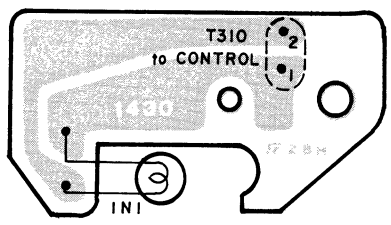
リーフスイッチ基板 CMR01C1490
LEAF SWITCH PCB



リールローテーション基板
REEL ROTATION
PCB CMR01D1440

コントロール基板
CONTROL PCB CMR01C189A





ハウジング基板
HOUSING PCB
CMR01D1430

GX-R66

ジャック基板
JACK PCB 1/3

J U	;T2058A504B
C A	;T2058A505B
E B S	;T2058A506B

フレキシブル基板
FLEXIBLE PCB 1/2
CMR01A0240 1/2

IC1 ; HAI2058

IC4 ; M5220L

IC5 ; M5220L

IC8 ; M51143L

IC9 ; M51143L

IC2 ; M54418P

TR14 ; 2SA1346
TR15 ; 2SC2603(E,F)
TR16 ; 2SA1346
TR27 ; 2SC2274K(E,F)

TR17 ; 2SC2603(E,F)

TR18 ; 2SD1012-V(G,H)

TR33 ; 2SC3400

VR2 ; METAL BIAS ADJ　VR3 ; CrO2 BIAS ADJ

バイアス電流

BOP (IPLS)	1
GND	2
IN PUT (R)	3
IN PUT (L)	4
NC	5
OUT PUT (L)	6
OUT PUT (R)	7
DOLBY IND	8
dbx IND	9
DOLBY OFF/B/C	10
+14V	11
MPX	12

TO SYS CON PCB J1　P1

REC/PB	1
+20V	2
DOLBY IND	3
dbx IND	4

TO NR PCB J1　P3

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E C B

2SC3382
2SC3383
2SC2320
2SC2274K
2SA1246
2SA999
2SA1392

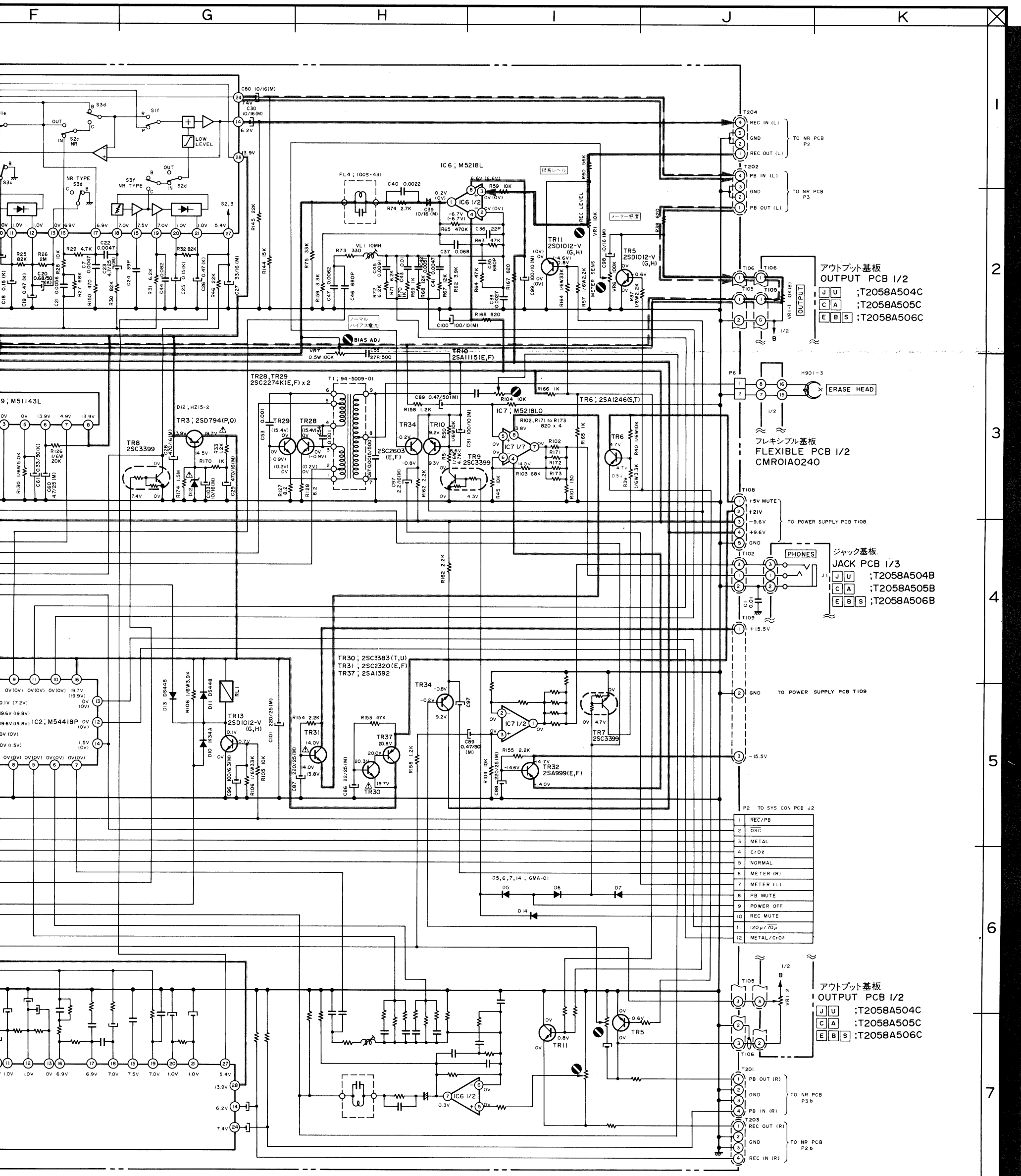
2SA1346
2SA1115
2SC2603
2SC3400

2SD794

2SD1012-V

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/4W (J)
ALL CAPACITORS IN μF 50WV

備考
C, Rの単位(特に指定された部品以外)
抵抗……Ω 1/4W(J),
コンデンサ……μF 50WV(J)
各電圧は、GND間のDC電圧をデジタルボルトメーターにて測定した値です

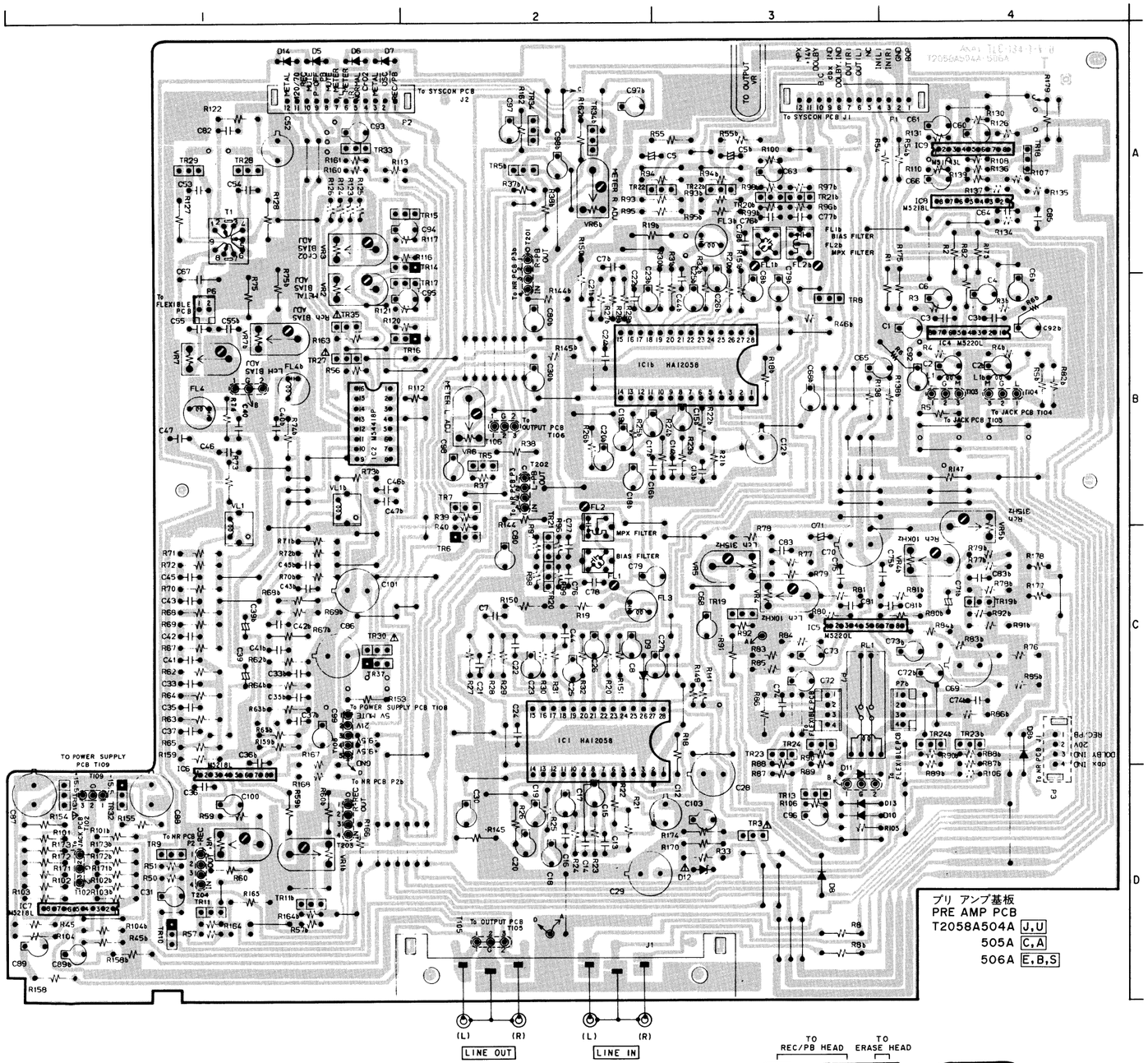


OTHERWISE SPECIFIED
SISTORS IN OHMS 1/4W (J)
PACITORS IN μF 50WV
定された部品以外)
Ω 1/4W(J).
μF 50WV(J)
DC電圧をデジタルボルトメーターにて

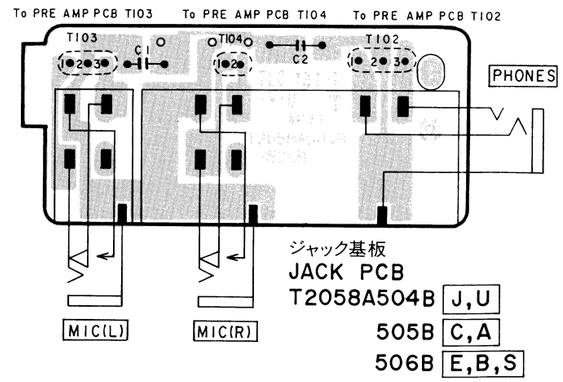
プリ アンプ基板
PRE AMP PCB
J U ; T2058A504A
C A ; T2058A505A
E B S ; T2058A506A

: B電源 = B (POWER SUPPLY) LINE
: 再生信号系 = REC SIGNAL LINE
: 録音信号系 = PB SIGNAL LINE
※ SIGNAL LINES ARE INDICATED LEFET CHANNEL ONLY.
VOLTAGES INDICATED AT PB MODE.
VOLTAGES INDICATED IN ( ) ARE REC MODE.
各部の電圧値は再生時の電圧値です ( )内の電圧は録音時の電圧値です

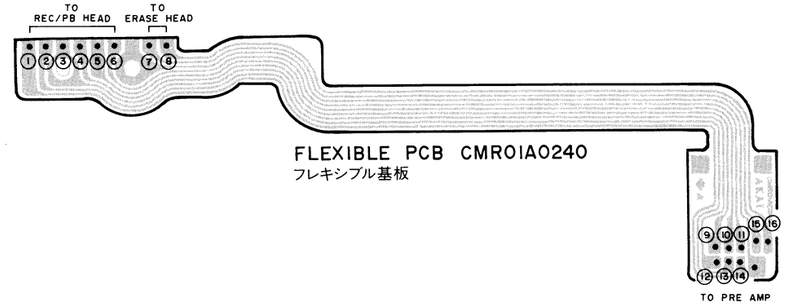
GX-R66
PRE AMPLIFIER
SCHEMATIC DIAGRAM
NO.3-2 840401A 4C



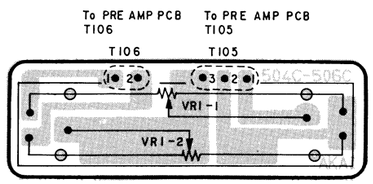
プリ アンプ基板
PRE AMP PCB
T2058A504A J,U
505A C,A
506A E,B,S



ジャック基板
JACK PCB
T2058A504B J,U
505B C,A
506B E,B,S



FLEXIBLE PCB CMR01A0240
フレキシブル基板



OUTPUT PHONES

アウトプット基板
OUTPUT PCB
T2058A504C J,U
505C C,A
506C E,B,S

注意：⚠の付された部品は、安全上重要部品です。交換の際は、指定部品以外は使用しないこと。

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SURETE. POUR MAINTENIR LE DEGRE DE SECURITE DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SECURITE QUE PAR DES PIECES RECOMMANDEES PAR LE FABRICANT.

2SA999
2SA1246
2SA1391
2SC3382
2SC3383
2SC2320
2SC2274K

2SD794

2SD1012-V

2SA1115
2SA1346
2SC2603
2SC3400

VR1----REC LEVEL ADJ
VR2----METAL BIAS ADJ
VR3----CrO2 BIAS ADJ
VR4----10KHz ADJ
VR5----PB LEVEL ADJ
VR6----METER SENS
VR7----NORMAL BIAS ADJ

FL1----BIAS FILTER
FL2----MPX FILTER

LOCATION OF COMPONENTS

IC'S

IC1---------C2,
IC1b-------B3
IC2--------B1
IC4--------B4
IC5--------C3
IC6--------D1
IC7--------D1
IC8--------A4
IC9------A4

TR'S

TR3------D3
TR5------A2
TR5b-----B2
TR6-----C2
TR7------C2
TR8------B3
TR9------D1
TR10-----D1
TR11-----D1
TR11b----D1
TR13-----D3
TR14-----A1
TR15-----A1
TR16-----B1
TR17-----B1
TR18----A4
TR19-----C3
TR19b----C4
TR20-----C2
TR20b----A3
TR21-----C2
TR21b----A3
TR22-----A2
TR22b----A3
TR23-----C3
TR23b----C4
TR24-----C3
TR24b----C4
TR27-----B1
TR28-----A1
TR29-----A1
TR30-----C1
TR31-----D1
TR32-----D1
TR33-----A1
TR34-----A2
TR34b----A2
TR35-----B1
TR37-----C1

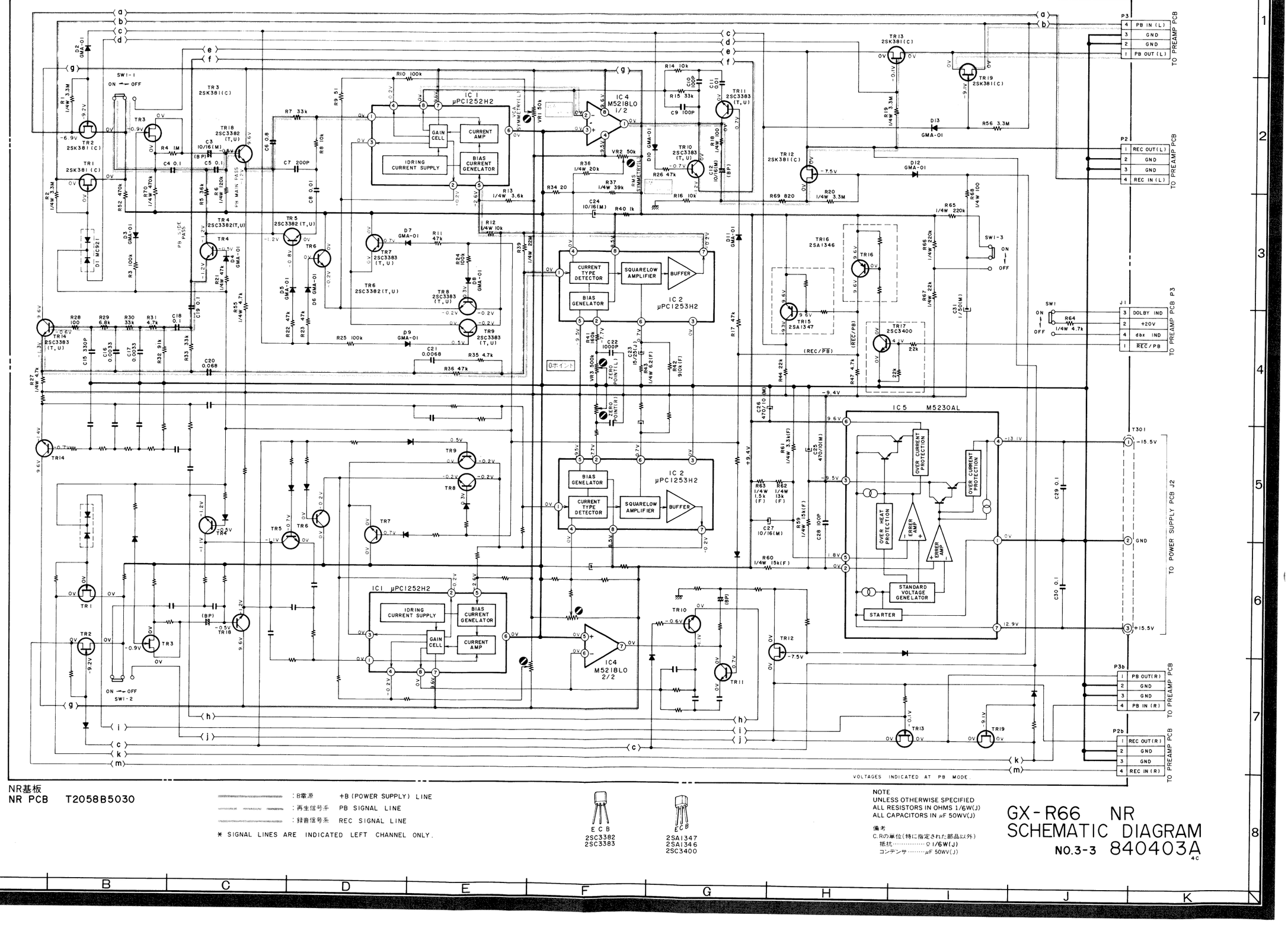
CONNECTORS

P1-------A3
P2-------A1
P3-------C4
P6-------B1
P7-------C3
P7b------C3

T102------D1
T103------B4
T104------B4
T105------D2
T106------B2
T108------C1
T109------D1
T201------A2
T202------B2
T203------D1
T204------D1

TR3----------2SD794(P,Q)
TR5,11,13,18,35-----2SD1012-V(G,H)
TR6----------2SA1246(S,T)
TR7 to 9--------2SC3399
TR10---------2SA1115(E,F)
TR14,16--------2SA1346
TR15,17,34------2SC2603(E,F)
TR19 to 24------2SC3382(T,U)
TR27 to 29------2SC2274K(E,F)
TR30---------2SC3383(T,U)
TR31---------2SC2320(E,F)
TR32---------2SA999(E,F)
TR33---------2SC3400
TR37---------2SA1392(S,T)

GX-R66


IC 1 μPC1252H2
IC 2 μPC1253H2
IC 4 M5218LO 1/2
IC4 M5218LO 2/2
IC5 M5230AL
GAIN CELL
CURRENT AMP
IDRING CURRENT SUPPLY
BIAS CURRENT GENELATOR
CURRENT TYPE DETECTOR
SQUARELOW AMPLIFIER
BUFFER
BIAS GENELATOR
OVER CURRENT PROTECTION
OVER HEAT PROTECTION
ERROR AMP
STANDARD VOLTAGE GENELATOR
STARTER
SW1-1 ON — OFF
SW1-2 ON — OFF
SW1-3 ON — OFF
SW1 ON — OFF
TO PREAMP PCB P3
TO PREAMP PCB P2
TO PREAMP PCB J1
TO POWER SUPPLY PCB J2
TO PREAMP PCB P3b
TO PREAMP PCB P2b
P3 4 PB IN (L) 3 GND 2 GND 1 PB OUT (L)
P2 1 REC OUT(L) 2 GND 3 GND 4 REC IN (L)
J1 3 DOLBY IND 2 +20V 4 dbx IND 1 REC/PB
P3b 1 PB OUT(R) 2 GND 3 GND 4 PB IN (R)
P2b 1 REC OUT(R) 2 GND 3 GND 4 REC IN (R)
T301 1 -15.5V 2 GND 3 +15.5V
(REC/PB)
VOLTAGES INDICATED AT PB MODE.

NR基板
NR PCB T2058B5030

：B電源 +B (POWER SUPPLY) LINE
：再生信号系 PB SIGNAL LINE
：録音信号系 REC SIGNAL LINE

* SIGNAL LINES ARE INDICATED LEFT CHANNEL ONLY.

E C B
2SC3382
2SC3383

E C B
2SA1347
2SA1346
2SC3400

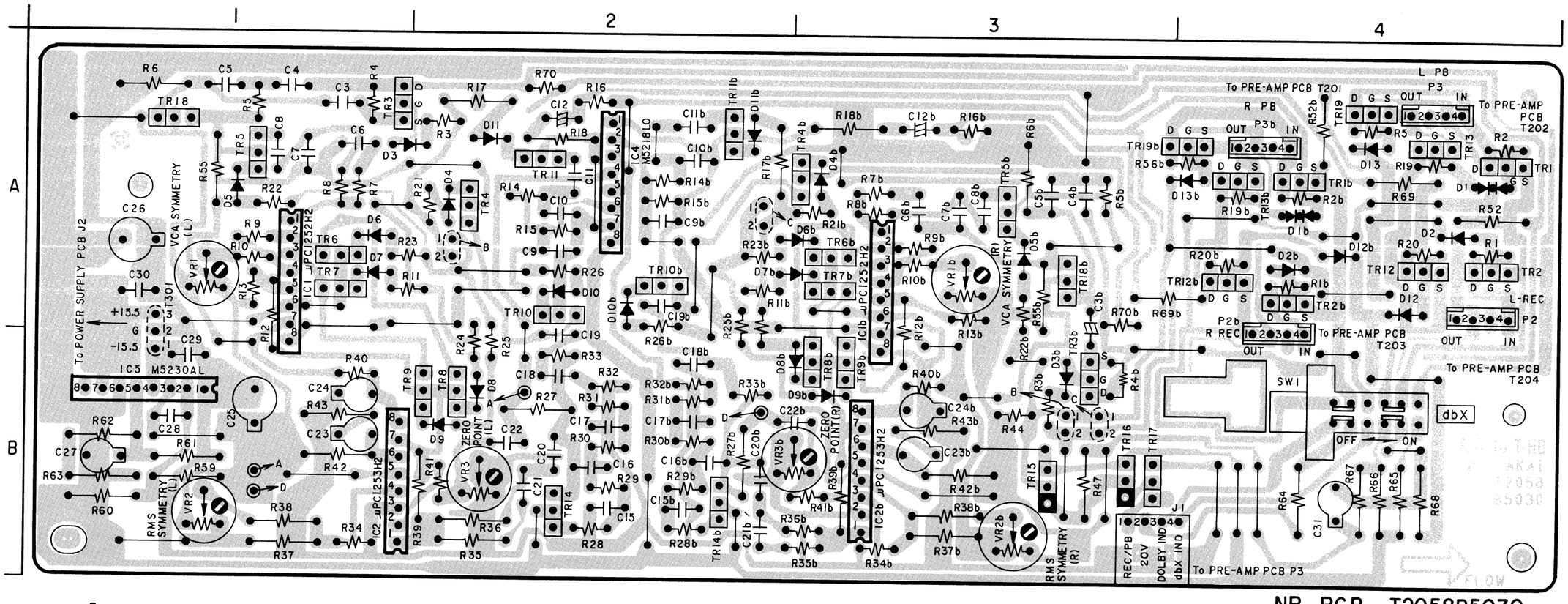
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W(J)
ALL CAPACITORS IN μF 50WV(J)

備考
C.Rの単位(特に指定された部品以外)
抵抗……Ω 1/6W(J)
コンデンサ……μF 50WV(J)

001499

GX-R66 NR SCHEMATIC DIAGRAM

NO.3-3 840403A
4C

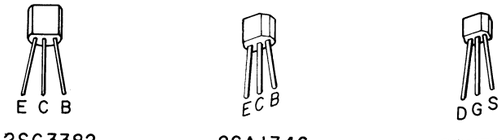


NR PCB T2058B5030
NR基板

B =PNP TRANSISTOR

B =NPN TRANSISTOR

TR1 to 3, 12, 13, 19-----2SK381(C)
TR4 to 6, 18--------2SC3382(T.U)
TR7 to 11, 14--------2SC3383(T.U)
TR15----------2SA1347
TR16----------2SA1346
TR17----------2SC3400



LOCATION OF COMPONENTS

IC'S

IC1-----A1
IC1b----A3
IC2-----B1
IC2b----B3
IC4-----A2
IC5-----B1

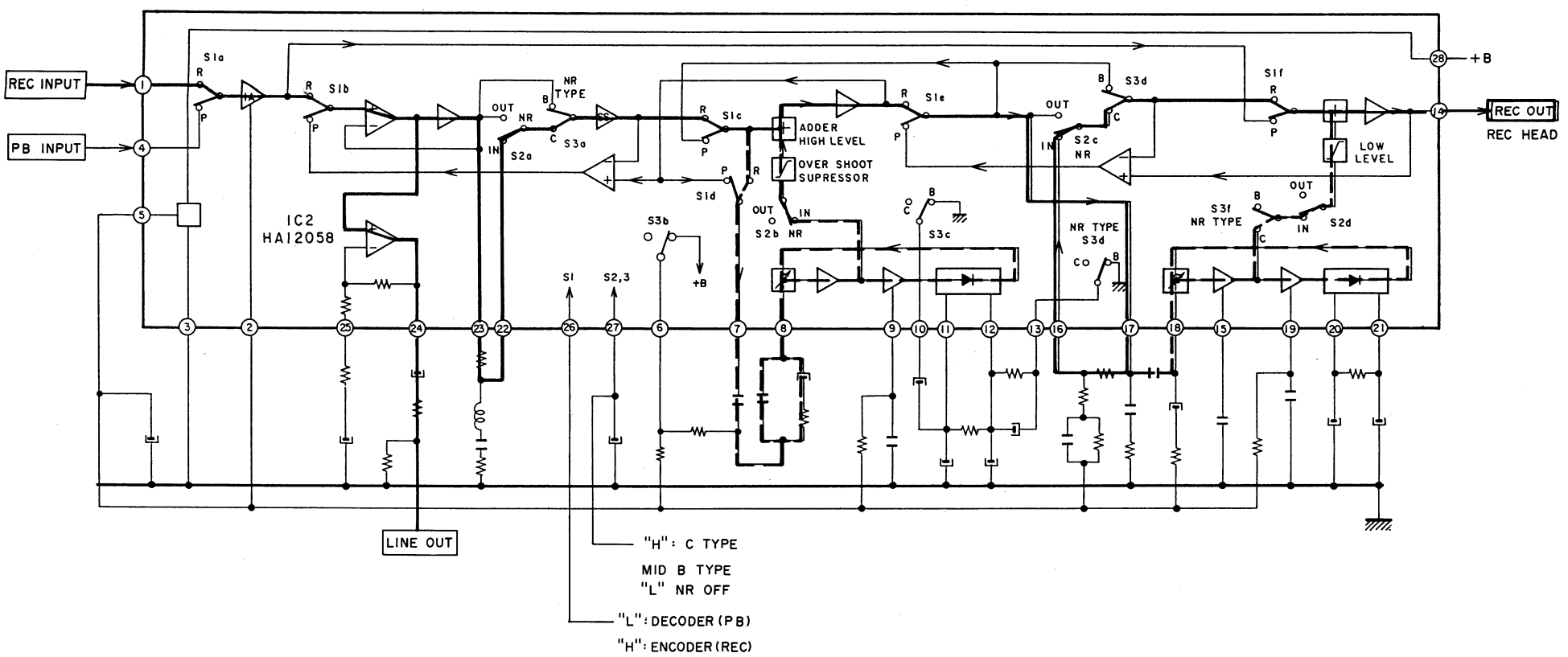
TR'S

TR1---A4 TR7---A1 TR13---A4
TR1b--A4 TR7b--A3 TR13b--A4
TR2---A4 TR8---B2 TR14---B2
TR2b--A4 TR8b--B3 TR14b--B2
TR3---A1 TR9---B1 TR15---B3
TR3b--B3 TR9b--B3 TR16---B4
TR4---A2 TR10--A2 TR17---B4
TR4b--A3 TR10b--A2 TR18---A1
TR5---A1 TR11---A2 TR18b--A3
TR5b--A3 TR11b--A2 TR19---A4
TR6---A1 TR12---A4 TR19b---A4
TR6---A3 TR12b--A4

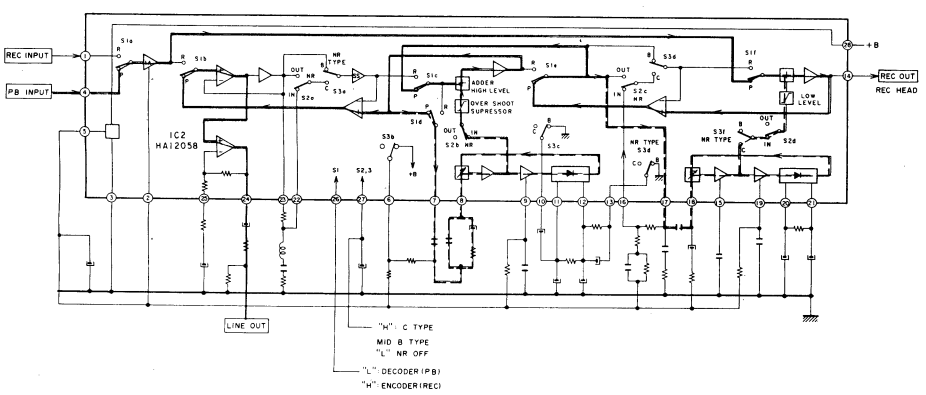
CONNECTORS

J1-----B4
P2-----A4
P2b----A4
P3-----A4
P3b----A4
T301---B1

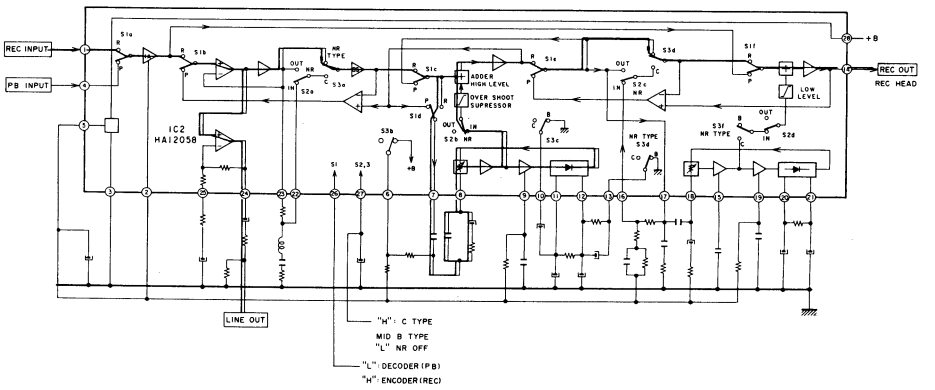
DOLBY C "ON" REC MODE （ドルビーC録音）



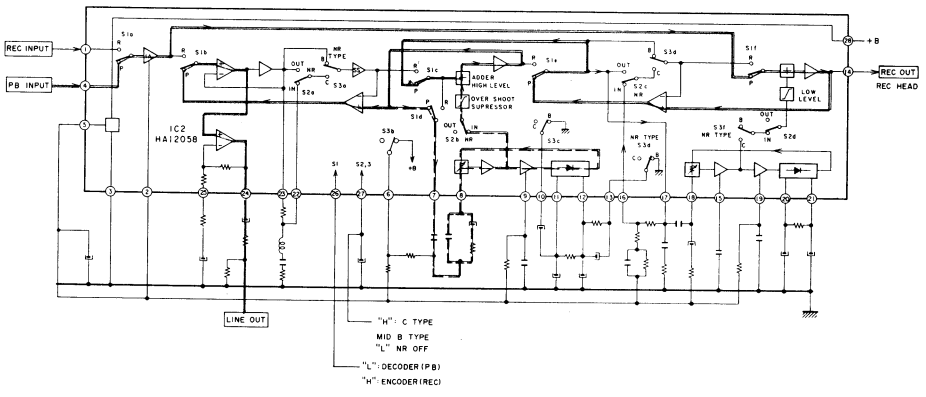
DOLBY C P.B MODE （ドルビーC再生）



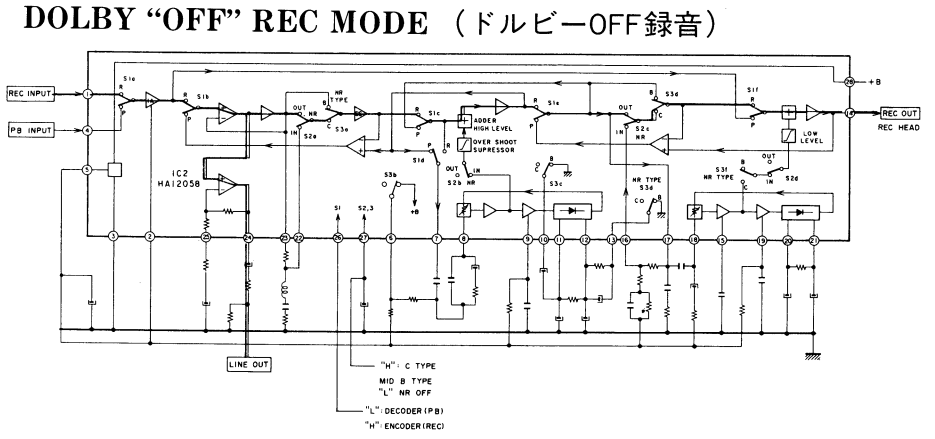
DOLBY B REC MODE （ドルビーB録音）



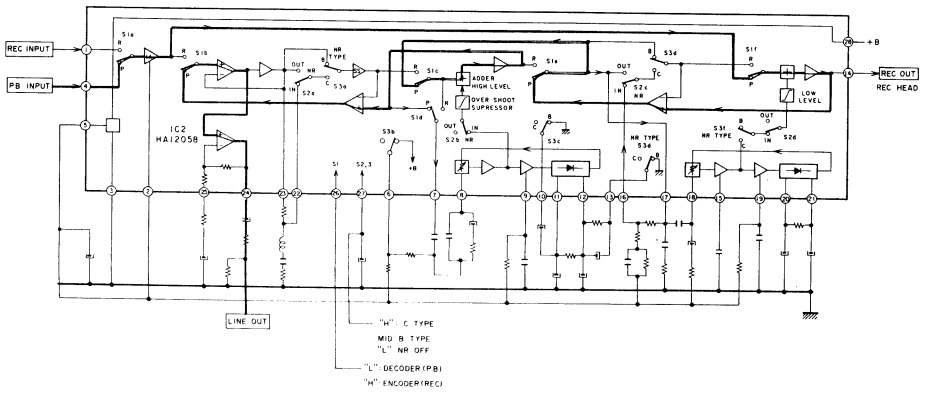
DOLBY B P.B MODE （ドルビーB再生）



DOLBY "OFF" REC MODE （ドルビーOFF録音）



DOLBY "OFF" P.B MODE （ドルビーOFF再生）



DOLBY IC (HA12038 HA12058)

SIGNAL LINE